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ATTENTION: BOX PATENT APPLICATION

Sir:

Transmitted herewith for filing is the patent application of

Inventor: **Paul Marie Gavarini**

For: **SYSTEM AND METHODS FOR FACILITATING BUSINESS-TO-BUSINESS ELECTRONIC COMMERCE**

This application claims priority to provisional application no. 60/142,287 filed on July 2, 1999 ("prior application").

Incorporation by Reference. The entire disclosure of the prior application is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

Enclosed are the following:

(X) A copy of the prior application, including 30 sheets of informal drawings, to be used as the present application;
(X) A Preliminary Amendment;
(X) An Information Disclosure Statement;
(X) A PTO Form 1449 listing five (5) references, copies of which are enclosed; and
(X) A return prepaid postcard.

CLAIMS AS FILED

FOR	NUMBER FILED	NUMBER EXTRA	RATE	FEE
Basic Fee			$345	$345
Total Claims	14 - 20 =	0 ×	$9	$0
Independent Claims	7 - 3 =	4 ×	$39	$156
If application contains any multiple dependent claims(s), then add			$130	$0

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CERTIFICATE OF MAILING BY "EXPRESS MAIL"

Attorney Docket No.	:	BEES.001A
Applicant	:	Paul Marie Gavarini
For	:	SYSTEM AND METHODS FOR FACILITATING BUSINESS-TO-BUSINESS ELECTRONIC COMMERCE
Attorney	:	Ronald J. Schoenbaum
"Express Mail" Mailing Label No.	:	EL512369882US
Date of Deposit	:	June 30, 2000

I hereby certify that the accompanying

Transmittal; Specification in 28 pages; 30 sheets of drawings; Information Disclosure Statement, PTO Form 1449 with 5 references; A Preliminary Amendment and a Return Prepaid Postcard are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and are addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

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BEES.001A PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Paul Marie Gavarini	Group Art Unit UNKNOWN
Appl. No.	:	UNKNOWN	
Filed	:	HEREWITH	
For	:	SYSTEM AND METHODS FOR FACILITATING BUSINESS-TO-BUSINESS ELECTRONIC COMMERCE	
Examiner	:	UNKNOWN	

I hereby certify that this correspondence and all marked attachments are being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D C. 20231, on

June 30, 2000
(Date)

Ronald J. Schoenbaum, Reg. No. 38,297

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Prior to Examination on the merits, please amend the above-referenced application as indicated below:

On page 1, after the title, please insert the following priority claim: --This application claims the benefit of U.S. Provisional Appl. No. 60/142,287, filed July 2, 1999.--

On page 1, line 19, change "desirably" to --desirable--.

Please add the following "abstract of the disclosure" section to the application:

--Abstract of the Disclosure

An electronic commerce system provides various features for assisting customers in locating items and generating orders from a merchant's electronic catalog, and for assisting customers and merchants in communicating about such orders. A user-definable categories feature allows customers and/or merchants to define search queries for searching the electronic catalog, and to store these search queries under user-defined category names for subsequent use.

Categories created by the merchant through this method are made available (e.g., presented as hyperlinks on a "categories" page) to all customers of the merchant, while categories created by customers are made available as personal categories for the respective customers (e.g., presented as additional hyperlinks on the categories page). An "active quote" feature allows the customer to view and modify quantities of items selected for prospective purchase throughout the various browsing or viewing modes. Specifically, regardless of the browsing mode (alphabetic browsing, category-based browsing, search, etc.), whenever the user views an item or a list of items, each such item is displayed in conjunction with a "quantity" field which indicates the number of that item currently selected for purchase. Thus, when the user views an item, the user can immediately determine whether the item is selected for purchase (and its quantity) without having to access a shopping cart page or other special page. A message audit trail feature allows a customer and a merchant to send messages to one another that are linked to a particular order, and to view an order-specific log of such messages.--

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 6-30-00

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SYSTEM AND METHODS FOR FACILITATING BUSINESS-TO-BUSINESS ELECTRONIC COMMERCE

Background of the Invention

In the field of Internet commerce, there are two major classifications of transactions. The first classification is business-to-consumer commerce, which typically involves a business selling its products or services to consumers over the Internet or other computer network. The other classification of electronic commerce is business-to-business commerce, which involves transactions between businesses.

Business-to-business electronic commerce transactions typically differ from business-to-consumer transactions in several significant respects. For example, in business-to-business transactions involving the sale of goods, it is common for a buyer to place orders periodically (e.g., once per month) for the same or a similar set of goods. In addition, each such order typically encompasses many different items, and relatively large quantities of such items. Further, in the course of a business-to-business transaction between, it is common for the buyer and the seller to communicate with each other about the transaction.

It would be desirably to provide an electronic commerce system which accomodates these and other characteristics of business-to-business commerce.

Brief Description of the Drawings

FIG. 1 shows a schematic diagram of an electronic commerce site hosting multiple merchant web sites.

FIG. 2 shows a schematic diagram of an electronic commerce site providing multiple services to merchants and customers.

FIG. 3 shows a "screen capture" depiction of a merchant web site login screen.

FIG. 3A shows a "screen capture" depiction of a detailed product description and picture, utilizing a product information and picture template..

FIGS. 4-13 show "screen capture" depictions of an electronic commerce application using a dynamic selected-item tracking system.

FIGS. 14-18 show "screen capture" depictions of an electronic commerce system utilizing customer configurable dynamic categories.

FIGS. 19-24 show "screen capture" depictions of an electronic commerce system utilizing merchant configurable dynamic categories.

FIG. 25 shows a conceptual diagram of a transaction between a merchant and a customer, utilizing a message audit trail feature.

FIG. 25A illustrates a "screen capture" depiction of an electronic commerce system utilizing a messaging system between a merchant and a customer, wherein the message is linked to an order page.

FIG. 26 shows a process flow diagram of a dynamic selected-item tracking feature.

FIGS. 27 and **27A** show process flow diagrams of a dynamic user-defined category feature.

FIG. 28 shows a process flow diagram of a message audit trail feature for an electronic commerce application.

FIG. 29 shows a schematic view of the databases involved in the message audit trail feature.

Detailed Description of the Preferred Embodiment

Throughout the following description, the term "web site" is used to refer to a user-accessible network site that implements the basic World Wide Web standards for the coding and transmission of hypertextural documents. These standards currently include HTML (the hypertext mark up language) and HTTP (the hypertext transfer protocol). It should be understood that the term "site" is not intended to imply a single geographic location as a web or other network site can, for example, include multiple geographically distributed computer systems that are appropriately linked together.

The present invention provides various inventive features for assisting customers in locating items and generating orders from a merchant's electronic catalog, and for assisting customers and merchants in communicating about such orders. These features are preferably embodied within a business-to-business electronic commerce system, but could alternatively be embodied in within a business-to-consumer or other type of electronic commerce system.

One important feature of the electronic commerce system involves the ability of customers and/or merchants to define categories for browsing the merchant's catalog. The categories are preferably defined using user-specified search queries. In a preferred embodiment, both the merchant and the merchant's customers are presented the option of applying a search query to the electronic catalog, and then saving the query under a user-specified category name for subsequent use. Categories created by the merchant through this method are made available (presented as hyperlinks on a "categories" page) to all customers of the merchant. Categories created by customers through this method are made available as personal categories (preferably presented as additional hyperlinks on the categories page) for the respective customers. When a category is selected for viewing, the corresponding query is applied to the merchant's database and the results presented to the user. Thus, any item additions by the merchant are automatically incorporated into the preexisting categories.

Another important feature of the invention involves allowing the customer to view and modify quantities of items selected for prospective purchase throughout the various browsing or viewing modes. Specifically, regardless of the browsing mode (alphabetic browsing, category-based browsing, search, etc.), whenever the user views an item or a list of items, each such item is displayed in conjunction with a "quantity" field which indicates the number of that item currently selected for purchase. Thus, when the user views an item, the user can immediately determine whether the item is selected for purchase (and its quantity) without having to access a shopping cart page or other special page. Further, in the preferred embodiment, the user can edit the quantity values within such fields to directly modify the item quantities selected for prospective purchase. This feature is particularly useful for merchants that commonly place orders for large numbers of different items, although the feature may also be used for business-to-consumer commerce.

Another important feature of the present invention involves the ability for a customer and a merchant to send messages to one another that are linked to a particular order, and to view an order-specific log of such messages. This feature is particularly useful for companies that have a need to communicate with each other about an order (e.g., negotiate delivery terms) during the order's pendency.

For the sake of simplicity, the drawings show screens (web pages) with relatively few items and quantities selected for prospective purchase; however, the advantages of the present invention become more fully apparent when the transaction includes large quantities of many different items, as do many business-to-business transactions.

The drawings show the electronic commerce system of the present invention implemented using the World Wide Web. However, those skilled in the art will recognize that the present invention could also be implemented in other fashions. For instance, the electronic commerce system of the present invention could be implemented using standard Internet and World Wide Web protocols through other commercial on-line providers, such as America Online, or through a private hosting service or network. Alternatively, the electronic commerce system of the present invention could be implemented using proprietary protocols over either a public or private network, or could be implemented entirely within a single computing facility. In addition, although the electronic commerce system disclosed herein embodies several different inventive features, it will be recognized that any one of these features could be implemented with out the others. Further, although the inventive features are described in the context of the sale of products, it will be recognized that the features could be used to facilitate transactions involving other types of items, such as securities, livestock, and various types of services.

FIG. 1 shows an electronic commerce site **50** whereby a plurality of merchants **52, 54, 56** can do business with a plurality of customers **58, 60, 62** using the Internet **64** or some other network as a common communications medium. In this embodiment of the present invention, each merchant **52, 54, 56** has a separate web site **66, 68, 70**, respectively, all of which are hosted and maintained by the host site **50**. The host site runs an electronic commerce application, comprising a customer application **51** (shown in phantom) and a merchant application **53** (shown in phantom), which provide electronic commerce facilities for customers **58, 60, 62** and merchants **52, 54, 56**, respectively. (The term "application" is used herein to refer collectively to executable code and associated web page components.) For example, when Customer A **58** wants to do business with Merchant A **52**, Customer A can access the customer application **51**

on Merchant A's web site **66**. In turn, Merchant A **52** can access the merchant application **53** to complete the transaction with customer A **58**. The host site is preferably operated by a third-party entity which charges the merchant a flat transaction fee for each order placed by a customer. In one embodiment, the merchants pay the third party entity in advance, for example, "pre-purchasing" one thousand transactions. Note that both the customer application **51** and the merchant application **53** may comprise either a suite of application programs or a single, integrated application program. In addition, both the merchant application **53** and the customer application **51** could be embodied in a single application program, or could be two separate application programs, running on one or more World Wide Web servers.

In addition to hosting the web sites for the merchants, the host site **50** also provides tools for allowing the merchant to manage and administer its own site through the merchant application **53**. In this way, a merchant can easily maintain an on-line presence without bearing the cost or the inconvenience of maintaining its own independent web site. Alternatively, the customer application **51** and the merchant application **53** could be set up and maintained by the merchant itself without the assistance of a third-party host site.

FIG. 2 shows a preferred architecture of the electronic commerce system. In this embodiment, the customer **72** and the merchant **74** both access the merchant web site **76** through the Internet **64**. The merchant web site **76** is hosted and maintained by the host site **50** and contains a variety of applications which enhance the functionality of the transaction between the customer **72** and the merchant **74**. Upon accessing the merchant web site **76**, the customer **72** logs onto the site through the web server **78**, which provides to the user HTML pages and forms retrieved from the HTML database **80**.

After logging onto the web server **78**, the customer **72** has access, through the customer application **51** to a variety of functions with which to transact electronic commerce. For instance, the customer **72** can choose to browse or search a product catalog **82**, which the web server **78** retrieves from the product database **84**. The product database **84** contains descriptions of the products, as well as information about the pricing and availability of the products. The product database **84** may also include a

picture database (not shown), which contains pictures of some or all of the products in the product database.

Alternatively, the customer **72** can create new product categories or browse existing categories **86**, which the web server **78** stores in and retrieves from the category database **88**. The category database **88** contains product categorization information, both for merchant-created and customer-created categories.

As noted above, the customer **72** can keep track of the items selected for prospective purchase and the quantity of each item selected through the dynamic item-selection tracking system **90** (also referred to as the "Active Quote" system). The dynamic selected-item tracking system **90** can store and retrieve information about items selected for prospective purchase in the present transaction or past transactions through the quote database **92**. The quote database **92** maintains a record of "quotes" generated by the customer **72**, where each quote includes a set of items and item quantities selected for prospective purchase. A quote is referred to as "active" when it is being accessed by the customer in a form in which the selected items and quantities can be modified. The quotes stored in the quote database **92** may include quotes from past transactions. In an alternative implementation, the quote database might also contain other information about the items selected for prospective purchase in a given transaction, for instance the price of the items on the date the items were selected for prospective purchase.

The customer **72** can also place new orders or view past orders **94**, each of which is stored in and retrieved from the order database **96**. In addition, the customer **72** can use the customer application **51** to view information about the status of the order, retrieved from the order database **96**. The order database **96** maintains a record of each order, including the items ordered and the status of each order.

The customer can send a message to or receive a message from **98** the merchant **74**, the message to be stored in the message database **100**. The customer **72** can also view a history (or "message audit trail") **98** of all messages for a particular order. The message database **100** records and stores all correspondence between customers and merchants and links the messages that relate to a particular order in order to facilitate the generation of the message audit trail.

Finally, the customer **72** can view or update its respective customer information **102**, retrieved from the customer database **104**. The customer database **104** contains all of the information about a merchant's customers, including the customer's biographical information, order history, payment status and credit terms. Note that the discussion of database structure and function in the preceding discussion is meant for illustrative purposes only and is in no way intended to limit the scope of the claims.

Under the present embodiment, the merchant **74** accesses its web site **76** in a similar fashion to the customer **72**, by logging onto a web server **106**, which retrieves HTML and forms from an HTML database **108**. However, upon logging on to the web server **106**, the merchant **74** enters the merchant application **53**, which presents a different set of options **110, 112, 114, 116** and **118** from the options **82, 86, 90, 94, 98, 102** presented by the customer application **51**. For instance, the merchant **74** can view and process orders **114** obtained from the order database **96**. The merchant **74** can also update the status of an order, for instance by checking boxes to indicate that the order has been accepted, declined, completed, etc.

In addition, the merchant **74** can create categories **112** to be stored in the category database **88** and retrieved when the customer **72** browses categories **86**. The merchant **74** can also update product information **116** in the product database **84** or view and update customer information **110** in the customer database **104**. Finally, the merchant **74** can send or receive messages or view a message audit trail **118** for a particular order or a particular customer, stored in the message database **100**. Those skilled in the art will recognize that a variety of other functions, administrative and otherwise, can also be accomplished by both the customer **72** and the merchant **74** through the customer **51** and merchant **53** applications, respectively.

FIG. 3 shows an example World Wide Web log in screen that may be used by both a merchant and a customer for accessing the merchant's site. The screen contains fields for a user I.D. **115** and a password **117**, as well as a button labeled "Log In" **119**. Under the preferred embodiment, each merchant has a separate Internet domain and log in site. However, in an alternative implementation, multiple merchants could share an Internet domain and login site, with the system differentiating the merchants, and their respective customers, by the log in ID provided.

Under the preferred embodiment, both the customer and the merchant log in to the electronic commerce system through the same web page, at which point the web server **78, 106** displays a page which corresponds to either the customer application **51** or the merchant application **53**, depending on the user I.D. provided. However, those skilled in the art can see how the system could easily be implemented with different log in procedures for both merchants and customers. For instance, in one embodiment, the customer **72** access the customer application **51** through the World Wide Web, while the merchant **74** might instead use a dedicated software client or some other method to access the merchant applications **53**. Similarly, the customer **72** might also use a dedicated software application or other method to access the customer application **51**. Alternatively, both customer **72** and merchant **74** might both use the World Wide Web to access the customer interface **51** and merchant interface, respectively, but each might access a different web site to interact with their respective applications.

FIG. 4 shows a "screen capture" of an example web page from the customer application **51** of the preferred embodiment of the present invention. The web page includes a navigation bar **119**, which maintains hyperlinks to common electronic commerce functions, including other methods for browsing and searching the product catalog, as well as administrative functions. The example web page depicted in **FIG. 4** shows a screen encountered while browsing **82** the product database **84**. As such, the example web page contains product listings, for example, the product listing **120**, as well as dynamically updated quantity information for each product, for example, the quantity **122** for the product listing **120**. The example web page also contains navigational buttons, for example, the "Next Products" button **123**, which allow the customer **72** to navigate through the entire product catalog.

The customer application **51** of the current embodiment embraces four methods of viewing the product catalog. The first three of these methods enable the customer **72** to locate products in the catalog. The first method of viewing the product catalog is simply through browsing the product database **84** (by clicking on the "Browse" link in the navigation bar **119**), which allows the customer **72** to view all of the products in the product database **84**, arranged in sequential (alphabetical) order. The second method of viewing the product catalog (which may be accessed by clicking on the "Search" link in

the navigation bar **119**) utilizes the search engine capabilities of the customer application **51** to quickly view all products in the product database **84** which satisfy a customer-supplied query. The third method of viewing the product catalog is to use the categories feature of the database, which described in detail below and is accessed by clicking on the "categories" link on the navigation bar **119**.

The fourth method of examining products in the product database **84** is viewing a detailed description and picture of a product, using a product information and picture templates. Whenever the customer application **51** displays a listing of products in one of the three methods described above, the product listing contains a hyperlink to a detailed description of the product, along with an optional picture. **FIG. 3A** illustrates an example screen display showing a detailed description **99** and picture **101** of the product. The arrangement of these elements **99, 101** is governed by a product information and picture template, which allows the merchant **74** to control how the elements will appear to the customer **72**, by designing the layout with ordinary HTML (or alternatively, other online display tools). In this way, the merchant **74** can deal with relatively easy-to-use design tools and need not interface directly with the product database **84** to generate the display of a detailed description and picture of a product. One benefit of this feature is the ability for the merchant **74** to create a relatively large number of product information and picture templates and assign different products to different templates. This feature provides to the merchant the power of displaying different products in different formats, yet still allows the merchant to design the formats using relatively simple tools.

Other implementations might contain other methods of viewing the merchant's catalog, for instance, an index of products wherein each entry in the index is a hyperlink which links to the respective product's listing in the catalog, or using traditional, non-dynamic categories to classify products and viewing products in those categories. In addition, an implementation might include "personal recommendations," whereby products are recommended to a specific customer, based on that customer's past purchasing habits. However, regardless of the method used to view products, the customer application **51** allows the customer **72** to immediately view and modify quantity information for any of the items shown in the view, using the Active Quote

system, discussed below. For instance, referring ahead to **FIG. 18**, which illustrates a screen produced by the customer application **51**, during viewing in the "categories" mode, the quantity information (collectively referred to as **192**) for the items shown on the screen (collectively referred to as **190**) can be viewed and modified without having to visit a separate screen or form. Similarly, **FIG. 3A** illustrates a screen produced by the customer application **51**, showing a detailed description **99** and picture **101** of a product, using product information an picture templates (described above). This display also allows the customer **72** to view and modify quantity information for the item displayed, using the currently-selected quantity field **103** and the "Update Active Quote" button **105**. As illustrated by these and other example screen displays, whenever the customer views a product - whether in one of the three catalog-viewing modes (browsing, searching, or categories), within a product detail page, or during viewing of the Active Quote page (**FIG. 6**) - the item is displayed together with a field which indicates, and allows the customer **72** to modify, the quantity of that product currently selected for prospective purchase.

The example web page also contains a button **124** which enables the customer **72** to utilize the dynamic selected-item tracking feature of the present invention to dynamically update the quantity information **122** for each product **120**. Referring to **FIG. 5**, if the customer **72** updates the quantity field **122A** for one of the products **120** and presses the button **124**, the customer application **51** updates the entry in the quote database **92** for the selected item **120** with the new quantity **122A**. In addition, the customer application **51** uses the Active Quote information for all selected items to calculate a new grand total amount **126** for both price and quantity of all selected items. The customer application **51** displays this information on the Active Quote page, depicted by **FIG. 6**, which displays all of the item and quantity information for the Active Quote. In an alternative embodiment, the customer application **51** might update the Active Quote in the quote database **92** without automatically displaying to the user the contents of the current Active Quote. The Active Quote page can also be accessed from by selecting the "Active" link from the navigation bar **119** on any page.

The Active Quote page (**FIG. 6**) shows all selected items **120** currently tracked by the customer application **51**, along with their respective, dynamically updated

quantities **122A**. Once again, the customer **72** has the option to update the Active Quote using the button **124** (this would be done, for example, if the customer had updated the quantity **122A** for the product **120** since last pressing the "Update Active Quote" button **124**). In addition, the customer **72** has the option at this point to place the order for all of the selected items **120** using the button **127**. Finally, the user can continue to browse or search the catalog using the navigation bar **119**.

FIG. 7 illustrates a page produced by the customer application **51** in response to the selection of the "Browse" link in the navigation bar **119**, after the Active Quote information has been updated.. The quantity information **122A** of product **120** has been updated by the customer application **51** to reflect the value in the Active Quote, as reflected in the quote database **92**. Because the customer **72** has not yet selected an additional product **128** for prospective purchase, that item's quantity **130** still reads zero. Referring to **FIG. 8**, the quantity **130A** of product **128** has been modified, indicating that the customer **72** has selected one item of this product **128** for prospective purchase. Pressing the "Update Active Quote" button **124** produces the screen display depicted by **FIG. 9**, which shows the updated quantities **122A, 130A** of the respective products **120, 128** as they have been stored in the quote database **92**, as part of the Active Quote. In addition, the grand totals **126** of both quantity and price have been updated with quantity information from the quote database **92**, combined with price information from the product database **84**. Once again, the customer **72** has the option of modifying the quantity fields **122A, 130A** and updating the Active Quote with button **124**, placing an order for the currently selected quantities using button **127**, or continuing to browse or search the catalog with the navigation bar **119**.

FIG. 10 is a screen capture of the customer application **51** once again producing a view of the items in the product database **84**, using the "browse" mode.. The customer application **51** has updated, using information from the quote database **92**, the selected quantities **122A, 130A** of the respective products **120, 128**. In this case, the customer **72** can choose to save the Active Quote using the "Save" link **132** on the navigation bar **119**. Selection of this link **132** produces the screen display shown in **FIG. 11**, which offers the customer **72** a field **134** in which to provide a name for the Active Quote to be saved, as well as a button **136**, which when clicked, saves the Active

Quote, and a button **138**, which when clicked, discards the Active Quote. If the customer **72** chooses to save the Active Quote using the appropriate button **136**, the customer application **51** will store the quantity information for the items selected for prospective purchase in the current transaction in the quote database **92** for future reference or retrieval. In one embodiment, the current Active Quote is saved automatically (using a default naming convention) when used to place an order.

Referring again to **FIG. 4**, if the customer **72** chooses to retrieve a saved quote from the quote database **92** using the link **139** on the navigation bar **119**, the customer application **51** will produce a screen display similar to that depicted in **FIG. 12**, allowing the customer to choose from among past quotes saved in the quote database **92**. Each customer can only view the quotes saved by or for that customer, and note the quotes of other customers. On this screen, the customer **72** can highlight a past quote **140** and make it active using the appropriate button **142**, causing the customer application **51** to retrieve all of the selected item quantity information from the quote database **92** for that quote and allowing the customer to see and modify the quantity information from the past quote for use in the present transaction. The retrieved quantity values for the saved Active Quote will be displayed to the user at any time the user views items in the catalog, whether browsing or searching the catalog **82**, browsing categories **86** or accessing product information through some other method.

Alternatively, before making a past quote **140** active, the customer **72** can choose to view the items selected in the past quote with the "View" button **144**, producing a screen similar to that depicted in **FIG. 13**. If, after viewing the products **148, 150, 152** and their respective quantities **154, 156, 158**, the customer **72** would like to make the past quote active, the user can press the "Make Active " button **160**, retrieving product and quantity information from the saved quote **140** and combining it with the product catalog information as described above allowing the customer to see, use and modify the selected item quantities from the past transaction.

Thus, if a customer often places the same or similar orders, the dynamic selected-item tracking feature of the present invention offers a substantial savings in time for the customer by allowing the customer to quickly recall past transactions and use them as a template for the current order. In addition, this feature of the present

invention allows the customer to more accurately place orders because the customer does not have to recall the items and quantities desired for each individual order, resulting in a substantial savings in both time and administrative costs for both the customer, as well as the merchant.

In another embodiment, the customer application **51** allows the customer **72** to combine multiple quotes or completed orders to create a composite order for use or modification in the current transaction. For example referring to **FIG. 12**, the customer **72** may be able to add a saved quote **140** to a quote that is currently active, or to select multiple quotes from list of past quotes **141** to make active simultaneously.

FIG. 14 is an example screen display depicting the dynamic, user-defined category feature of customer application **51**. The screen depicts two categories, **162, 164**, along with the number of items **166, 168** contained within each respective category. The categories may be either customer-defined, such as the category referenced by **164**, or merchant defined, as is the category referenced by **162**. In the preferred implementation, the customer application does not distinguish between the merchant-defined category **162** and the customer-defined category **164** when displaying categories, but an alternative implementation might visually distinguish the two types of categories. Both of the category names **162, 164** are hyperlinks. Clicking on either category will produce a screen displaying the items within that category. In addition, the customer **72** can choose to create a new category using the appropriate button **170**, delete an existing category using the respective button **172** or reorder the categories using the corresponding button **174**. Finally, the customer **72** can access the other features of the customer application **51** using the navigation bar **119**.

If the customer **72** selects the button **170** to create a category, the customer application **51** displays a screen similar to that depicted in **FIG. 15**. On this screen, the customer **72** is presented with a field **176** into which the customer can type search criteria, using standard Boolean logic or other search methods. After providing the search criteria, the customer **72** can press the "Search" button **178**, at which point the customer application **51** will search the products database **84**, using the search query provided by the user in the field **176**. Typically, the search query is applied to the

product names and descriptions provided by the merchant, although other known techniques of searching for products may also be used.

After performing the search, the customer application **51** displays the results of the search on a screen similar to that depicted in **FIG. 16**. On the results screen, the customer application **51** displays a list of products **180** matching the search query entered in the field **176**. The customer application **51** also displays a field **182** into which the customer **72** can type a name with which to save the new category in the category database **88**. The customer **72** can enter a name into the field **182** and press the appropriate button **184** to save the new category, or alternatively the customer can choose to discard the results of the search without creating a new category by pushing another button **186**.

If the customer **72** does save the category using the appropriate button **184**, the customer application **51** returns to the category list screen as depicted in **FIG. 17**. In addition to the pre-existent categories **162, 164**, the new saved category **188** is displayed as a hyperlink for selection by the customer **72** and is saved in the category database **88** for future use. If the customer **72** clicks on one of the hyperlinks for a category **188**, the customer application **51** displays a list of products matching the query associated with that category, as shown in **FIG. 18**. In the preferred implementation, the customer application **51** searches the product database **84** for products matching the search criteria for each category before displaying the category list screen, depicted by **FIG. 17**, in order to provide an updated count of the number of items **189** in each category **189**. In addition, under the preferred implementation, the customer application **51** caches the results of these searches. When the customer **72** subsequently selects one of the hyperlinks for a category **188**, the customer application **51** recalls the cached product list for that category and displays it to the user, as shown in **FIG. 18**.

In an alternative implementation, the number of items in each category might be stored within the category database **88**, instead of dynamically calculated by the customer application **51**. Additionally, in an alternative implementation, when the customer selects a category hyperlink **188**, the customer application **51** might not use the cached results of searches performed when displaying the category list screen (**FIG. 17**) to display the items in the category. Instead, in this alternative implementation,

when the customer selects a category hyperlink, the customer application might search the product database **84** at that time, using the query associated with that category, stored in the category database **88**, and display the products matching the search criteria, as shown in **FIG. 18**.

Under either the preferred or alternative implementations described above, the customer application **51** dynamically provides an updated list of products in the category every time the customer **72** views that category. Thus, when items are added to the product database **84**, the customer application **51** will automatically include any new items matching the search criteria for a particular category the next time category is viewed by the customer **72**, without requiring any other action on the part of the merchant **74** or the customer **72**.

Referring to **FIG. 18**, in addition to showing the products within the category (collectively referred to as **190**), the customer application **51** also shows the quantity information **192** for those products obtained from the quote database **92** by the dynamic selected-item tracking system, as explained above. On this screen, the customer **72** can modify the quantity **192** of any product **190** within the category to select the product for prospective purchase in the current transaction. When the customer **72** selects the appropriate button **124**, the customer application **51** updates the quote database **92** with the currently-selected product **190** and quantity **192** information. Alternatively, the customer **72** can choose to access other features of the customer application through the navigation bar **119**.

One important advantage of this embodiment of the present invention over the prior art is the fact that the categories are dynamic, in that the category database **88** contains the queries that define the categories and not the products within the categories themselves. In this way, whenever a category is selected, the customer application **51** constructs the category dynamically by performing a search of the product database **84**, using the search criteria associated with the selected category. Another implementation might use a different method to allow customers to categorize products, for instance a checkbox next to each product, which, when checked, would add the selected product to a particular category. Another important benefit of the present embodiment is that the customer **72** can easily and quickly create private categories for future use by the

customer alone. In addition, as will be seen, the merchant **74** through use of the merchant application **53**, can also create and modify public categories for use by all customers of that merchant.

FIG. 19 is a screen display depicting the merchant application **53**. Similar to the customer application **51**, the merchant application **53** contains a navigation bar **194** for navigating among the various functions provided by the merchant application. In particular, the merchant application **53** allows the merchant **74** to create and maintain categories in a similar fashion to the facility provided to customers, described above. If a merchant selects the category management hyperlink **196**, the merchant application **53** produces a screen, similar to that depicted in **FIG. 20**, which displays each public category **198**, along with the number of items in that category **200**. In addition to the buttons for creating a category **170**, deleting a category **172**, or reordering categories **174**, that the merchant application **53** shares with the customer application **51**, the merchant application also allows the merchant **74** to modify the category using the link **202** next to the category name **200**. By modifying a category, the merchant **74** can change the search parameters that define that category without having to delete that category and create a new category. Although the preferred implementation only describes this feature in the context of the merchant application **53**, the customer application **51** of the present invention also includes this feature, providing the customer **72** with the ability to modify private categories, as well.

The method provided to the merchant **74** for creating categories is similar to that provided to the customer **72** for creating private categories and is shown in **FIG. 21**. The merchant can provide search criteria using standard Boolean logic or other search formats in the "Search Criteria" field **176** and press the "Search" button **178**, at which point the merchant application **53** executes the search, using the criteria entered by the merchant **74**, and displays a list of products matching the search criteria, as illustrated in **FIG. 22**. Similar to the customer application **51**, the merchant application **53** provides a field **182** for naming the category, as well as a button **184** to save the category and a button **186** to discard the category, in the event that saving the category is not desired. If the merchant **74** chooses to save the category using the appropriate button **184**, the merchant application **53** will add the search criteria for the category to the category

database **88** and will display the new category in the list of categories as depicted in **FIG. 23**. In addition to the pre-existent category **198**, with its associated number of items **200**, the category lists now shows the newly created category **204** with its associated number of items **206**. In addition, the merchant application **74** provides a hyperlink **208** to modify the search criteria for the new category **204**, in the same way it provides a hyperlink **202** to modify the pre-existent category **198**. When the merchant **74** clicks on a hyperlink **204** for a category, the merchant application **53** applies the associated query to the product database **84** and displays the search results, as depicted in **FIG. 24**. In other embodiments, the ability to store queries as categories for later use according to the invention can also be used to assist users in locating other types of items, such as online auctions, classified advertisements, chat rooms, and other web sites.

An additional feature of the present invention is the ability of both the customer **72** and the merchant **74** to communicate with one another via electronic messages, including messages that are linked to specific orders. This feature further provides both the customer **72** and the merchant **74** with the ability to view an entire history of the messages with respect to any particular order. The customer application **51** provides the facility for the customer **72** to submit orders and view the status of submitted orders. The merchant application **53** provides the facility for the merchant **74** to view, process, and update the status of orders. Both the customer application **51** and the merchant application provide the customer **72** and the merchant **74**, respectively, with the option of sending a message, which is linked to a particular order, to the other party at any time in the order placement and fulfillment process. In addition, both the customer application **72** and the merchant application **74** include a facility, in the form of a "history" button, to view a complete or partial message history for a particular order. In other embodiments, the option to view the message history may be provided to only one of the two parties.

For example, **FIG. 25A** shows a screen display produced by the merchant application **53**, allowing the merchant **74** to view the customer's **72** order. On this screen, the merchant **74** can update the status of the order (for instance, from "accepted" to "shipped"), by changing the value in the pull-down menu **211** and then selecting the

"Update, then view next" button **213**. In addition, the merchant **74** can view that latest message **215** from the customer **72**, send a message to the customer, using the message input area **217**. Finally, the merchant **74** can view a history or log of all messages relating to the current order, by pressing the "History" button **219**.

FIG. 25 shows a theoretical transaction between a customer or buyer **72** and a merchant **74**, utilizing the message audit trail feature of the present invention. In step 1 of the transaction, represented by box **210**, the customer **72** places an order with the merchant **74**. Along with the order **212**, the customer **72** has included a message **214** to the merchant **74**, which the user has entered into a message box at the bottom of the order form (not shown). The message reads, "Please send order tomorrow." When the customer presses the "Send Order" button **216** on the order form (not shown), the order and corresponding message **212** are transmitted to the merchant **74**.

In step 2 of the transaction, represented by box **218**, the merchant **74** receives and reviews the order **212** and sends a message **220** in response to the customer's message **214**, to the effect that the order cannot be filled as requested because one of the items ordered is out of stock. The facility allowing the merchant **74** to send such a message to the customer **72** is provided by the merchant application **51**. When the merchant **74** presses the "Update Order" button **222** on the order form (not shown), the merchant's message **220** is linked to the order **212**.

In the next step **223** of the transaction, the customer **138** reviews the order **212**, and pushes the history button **214** on the order form (not shown), at which time all of the messages **216** linked to the order **212** are displayed to the customer **72**. The customer **72** then types a response **218** to the merchant **74** and presses the "update order" button **222**, indicating that the merchant should simply fill the available portion of the order and send it immediately.

Next, **224**, the merchant **74** reviews the order **212** and upon pressing the history button **214** on the pending order page (not shown), is presented with the updated history **216A** of all messages linked to the order **212**. The merchant then modifies the order **212A** to accommodate the customer's request in the latest message **218** and sends another message **226** to the customer **72**, indicating that the available portion of the

order will be shipped immediately. The merchant **74** then presses the "update order" button **222** on the order form (not shown), updating the order information.

Finally, **228**, the customer **72** reviews the modified order **212A** and upon pressing the history button **214** on the order form (not shown), is presented with the entire history **216B** of all messages linked to the order **212A**, completing the transaction. As noted in box **230**, this process can continue indefinitely and provides a tangible record of the complete transaction between merchant **74** and the customer **72**.

The message audit trail of the present invention preferably provides the message audit trail in summary form if the message history linked to a particular order exceeded a threshold value, either in terms of characters (or bytes), or in terms of number of messages contained in the log. This summary format displays the first few words of each message in the history, along with a hyperlink to the full text of the corresponding message, in order to allow the customer **72** or merchant **74** to quickly find and access a particular message from among an extensive history of such messages. An additional implementation could also include a facility for searching the full text of the message log in order to more easily facilitate locating a particular message in the transaction. In yet another implementation, the electronic commerce system of the present invention could allow the merchant **74** and the customer **72** to send electronic mail to one another over the Internet or some other electronic mail system, and could maintain a message audit trail for those messages as well. In such an implementation, the message audit trail could also be linked to the order to which the messages pertain. It will also be recognized that the message audit trail feature can be used in transactions.

FIG. 26 shows a process flow diagram for the dynamic selected-item tracking ("Active Quote") feature of the present invention. The diagram illustrates a sequence of steps that are performed by the customer application **51** to maintain a dynamic record of the respective quantity of each item selected for prospective purchase in the current transaction. Products can be selected for prospective purchase through a variety of methods **232, 234, 236, 238, 240**. If the customer **72** chooses to simply browse the catalog **232**, the customer application **51** will select for dynamic tracking all products in the catalog **248**. If, alternatively, the customer **72** chooses to search the catalog **234**, after the user enters a search criteria **242**, the customer application **51** selects for

dynamic tracking the products that match the search criteria **250**. If the customer **72** instead chooses to search the catalog using categories **236**, the customer application **51** allows the customer **72** to choose a category **244** and subsequently selects for dynamic tracking all products in the chosen category **252**. Finally, if the customer **72** chooses to use a product information and picture template **238**, to find products, the customer application **51** builds a hyperlink **246** and display it for the customer **72**. If the customer **72** selects the hyperlink, the customer application **51** selects the linked-to product for dynamic tracking **254**. Thus, although the customer **72** can access product descriptions and selections through a variety of methods **232, 234, 236, 238, 240**, the customer application **51** dynamically tracks the selected items, no matter how the customer selects the products. In another embodiment, the customer application **51** could also be used to dynamically track items selected by other methods, for example by linking from another web page, either within or without the merchant's web site.

After the products have been selected for dynamic tracking **248, 250, 252, 254**, the customer application performs the step **256** of extracting the respective product data from the product database **84** and the picture database **258**, as necessary. The customer application **51** next performs the step **260** of searching for the selected products in the quote database **262**. If the customer application **51** fails to find any of the selected products in the quote database **262**, it performs the step **266** of merely displaying the catalog information for the selected items. If, on the other hand, the customer application **51** does find some of the selected items in the quote database **262**, it performs the steps **264** of retrieving from the quote database the quantity of each product found there and combining this quantity with the respective data obtained from the product and picture databases to integrate information about the currently-ordered quantity with the description of the product and other product information. It then performs the step **266** of displaying the combined information to the customer **72** using whichever selection interface **232, 234, 236, 238, 240** the customer used to select the items. In this way, the customer application **51** tracks the items currently selected by the user for viewing and dynamically updates and displays the quantity of each item selected for prospective purchase in the current transaction, without requiring the user to visit a separate screen or page.

Those skilled in the art are familiar with the technique of using categories to subdivide a product catalog, in order to facilitate browsing by a customer. Creating and maintaining these categories can be a difficult task and is normally performed solely by the merchant for the benefit of the customer. Thus, one object of the present invention is to simplify process of the creating and maintaining categories for merchants. Another, related, object of the present invention is to enable users themselves to create and maintain categories. As described above, the present invention accomplishes these goals through the dynamic user-defined category feature, process diagrams of which are shown in **FIGS. 27** and **27A**.

In one embodiment of the dynamic user-defined category feature, shown in **FIG. 27,** the dynamically-built categories are based on a specific search executed by the customer **72**. In the first step **268** of this process, the customer **72** utilizes the customer application's search engine to query the product database, **84**. If no products match the search criteria **270** the customer application **51** does not create categories and displays no matches for the search **272**. At this point the process ends. If, on the other hand, the customer application **51** finds products that match the search criteria, shown in block **270**, the customer application **51** next performs the step **274** of displaying the matching products and subsequently querying the customer **72** whether a category should be created from the entered search criteria, shown in block **276**. If the customer **72** does not elect to create a new category, a decision represented by block **278**, the customer application **51** ends the process, represented by block **280**.

If, on the other hand, the customer **72** does want to create a new category based on the entered search criteria, represented by block **278**, the customer application **51** performs the step **282** of saving the customer's search criteria in the search criteria database **284** In an alternative implementation, the customer application might perform the optional step of .isolating key words from the customer's search criteria and saving only those key words in the client search criteria database **284**, in order to conserve space in the search criteria database or promote more efficient searching, for example.. The customer application **51** next performs the step **286** of prompting the user to name for the new category. Finally, the customer application **51** performs the step **288** of saving the new category in the category database **88**, using the name provided in block

286. At this point 290, the customer 72 can now access the new category by name, as the user would access any other category.

An additional feature of the present invention is the facility to create categories based not only on a specific query, but based also on a composite of substantially identical queries commonly used by a particular customer. To implement this feature, the customer application 51 keeps a log of recent queries for each customer 72. Periodically, the customer application 51 will compare recent queries by the same customer 72 to find query resubmission events, which are multiple instances of the same or substantially similar queries by the same customer 72. Upon finding such query resubmission events, the customer application will automatically create and save a category embodying the commonly-used query, optionally with customer 72 confirmation. The queries may be compared by comparing the queries themselves (e.g., term-by-term), by comparing the results of such queries, or through both methods. The customer application 51 may require some threshold number of resubmission events (e.g., 15) before creating a category for the customer.

This feature of the invention could also be used to assist the merchant in defining public categories. For example, the queries of all customers of a particular merchant could be compared to identify and generate categories for the most popular searches.

A block diagram of this feature is shown in **FIG. 27A**, This feature is based on a statistical analysis of the most commonly used searches by the customer 72. Under this process, the customer application 51 first searches the client search criteria database 284 for the most used search criteria, a step represented by block 292. The system next performs the step 294 of offering to the customer 72 the option to build one or more new categories based on the most frequently used criteria, assuming such categories do not already exist. If the customer 72 does not accept the new category, a decision represented by step 296, the customer application 51 ends the process. If, on the other hand, the client does accept the new category in the decision represented by block 296, the system performs the step 288 of saving the new category in the category database 88, with a name chosen by the customer 72 (step not shown). Once again, at this point 290, the customer 72 can now access this category as with any other category.

Although the implementation described here details the process the customer application **51** uses to create dynamic, user-defined categories, the merchant application **53** could e provides the same functionality to the merchant **74**, as described and shown in **FIGS. 19-24**, above.

FIG. 28 is a process diagram depicting the above-described message audit trail feature of the present invention. The first step **300** in the message audit trail feature is the creation of an order **301** by the client or customer **72**, during which the customer enters an optional message. The order **301** is then stored in the order database **96**. The customer application **51** then next attaches the message **302** to the order **301** in the step denoted by block **303**. The message **302** is stored in the message database **100** and is linked to the order **301**, which remains stored in the order database **96**. Next, the merchant **74** reviews the order **301** as shown in block **304**. If a message **302** was in fact attached to the order **301** in step **303**, that message is retrieved from the message database **100** through its link to the order **301**, and displayed in conjunction with the order. The merchant **74** then optionally creates another message **302A**, associated with the order **301**. Like the customer's message **302**, the merchant's message **302A** is stored in the message database **100** and linked to the order **301** stored in the order database **96**. At the final step of the process **308**, the customer **72** and merchant **74** review the order **301** and attached messages **302** and **302A** to decide if there is agreement between the two parties. If so, the transaction is concluded and the process ends. If not, the process continues from step **303** where the customer **72** can attach another message **302** to the order, and the process executes another iteration. Although not shown in the drawing, it is possible for either the customer **72** or the merchant **74** to append a message to the order at any time during the pendancy of the order. Additionally, one party may create two or more messages consecutively; the party need not wait for the other party to respond to the first message before creating subsequent messages.

FIG. 29 shows a schematic view of the databases involved in the message audit trail feature. The order **301** is stored in the order database **96** and the messages attached to the order **302, 302A, 302B, 302C** are stored in the message database **100**. In addition, the stored messages **302, 302A, 302B, 302C** in the message database **10** are

linked to **0** the stored order **301** in the order database **96**, in order to enable the customer application **51** and merchant application **52** to provide a linked message audit trail of all messages **302, 302A, 302B, 302C** associated with a particular order **301**. In the preferred implementation, when the message is stored in the message database **100**, a link to the associated order **301** in the order database **96** is stored as part of the message record.

Although this invention has been described in terms of certain preferred embodiments, other embodiments that are apparent to those of ordinary skill in the art are also within the scope of this invention, including embodiments that provide some, but not all of the benefits and features described herein. Accordingly, the scope of the present invention is intended to be defined only by reference to the appended claims.

WHAT IS CLAIMED IS:

1. A method for facilitating browsing of an electronic catalog of a merchant, comprising the steps of:

receiving a search query from a user;

applying the search query to the electronic catalog to generate a search results list;

displaying at least a portion of the search results list to the user for viewing; and

presenting the user an option to save the query for subsequent use as a user-defined category.

2. The method as in Claim 1, wherein the step of presenting the user an option to save the query comprises prompting the user to enter a category name.

3. The method as in Claim 1, further comprising:

storing the query as a user-defined category; and

presenting the user an option to browse the catalog using the user-defined category and a plurality of merchant-defined categories.

4. The method as in Claim 1, further comprising:

comparing the query to a history of queries submitted by the user to search for substantially-identical query submissions; and

using the substantially-identical query submissions to automatically generate a personalized category for the user.

5. An electronic commerce system, comprising:

a database which contains an electronic catalog of items;

a computer system coupled to the database and to a computer network; and

a software system which runs on the computer system and provides functions for users to at least (1) formulate queries for searching the catalog, (2)

assign names to individual queries, and (3) store the queries for subsequent use using said names, the software system thereby enabling users to create user-defined categories for browsing the catalog.

6. The electronic commerce system as in Claim 5, wherein the software system automatically compares queries submitted by the same user to identify query resubmission events, and uses the query resubmission events to automatically create and /or suggest categories for users.

7. A method for facilitating electronic commerce between a buyer and a seller, comprising the computer-implemented steps of:

providing a first user interface through which a buyer places orders with a seller and views the status of such orders, the first user interface including an option for the buyer to generate and send messages to the seller that are linked to a particular order;

providing a second user interface through which the seller views and updates the status of such orders, the second user interface including an option for the seller to generate and send messages to the buyer that are linked to a particular order; and

in at least one of the first and second interfaces, displaying a log of the messages that are linked to a selected order, including messages generated by the buyer and messages generated by the seller.

8. The method as in Claim 7, wherein the step of displaying a log comprises displaying the log in a summary format in which portions of the messages are omitted.

9. An electronic commerce system, comprising:

a computer system coupled to a publicly-accessible computer network, the computer system including:

a first user interface through which buyers place orders over the network with a merchant and view the status of such orders, the first interface including a message field for a buyer to generate and submit to the merchant messages that are linked to particular orders; and

a second user interface through which the merchant views the orders, including corresponding order-specific messages from buyers, and specifies the status of the orders, the second interface including a message field for the merchant to generate and submit messages to the buyers that are linked to specific orders;

wherein at least one of the first and the second user interfaces displays a history of the messages between the merchant and a buyer that are linked to a selected order.

10. A method for facilitating the generation of an order of multiple items from an electronic catalog of items, comprising:

presenting a user an option to view the electronic catalog using multiple browsing modes, each browsing mode providing a respective method for identifying desired items in the catalog;

within each of the browsing modes, providing the user an option to select and specify quantities of items for prospective purchase; and

when the user views an item that has been selected for prospective purchase within any one of the browsing modes, automatically displaying a corresponding purchase quantity for the item.

11. The method as in Claim 10, wherein the multiple browsing modes include (1) a search mode in which users generate and submit queries for searching the catalog, and (2) a category-based mode in which users browse the catalog using pre-existing item categories.

12. An electronic commerce system, comprising:

a database which contains an electronic catalog of items sold by a merchant;

a computer system coupled to the database and to a publicly-accessible computer network; and

a computer program which runs on the computer system and provides multiple browsing modes for buyers to browse the catalog and select items for prospective purchase, wherein the computer program displays to a buyer a quantity of each catalog item selected for prospective purchase throughout the multiple browsing modes, to thereby facilitate generating orders for multiple items.

13. A method for facilitating the generation of an order from a catalog of items, comprising the steps of:

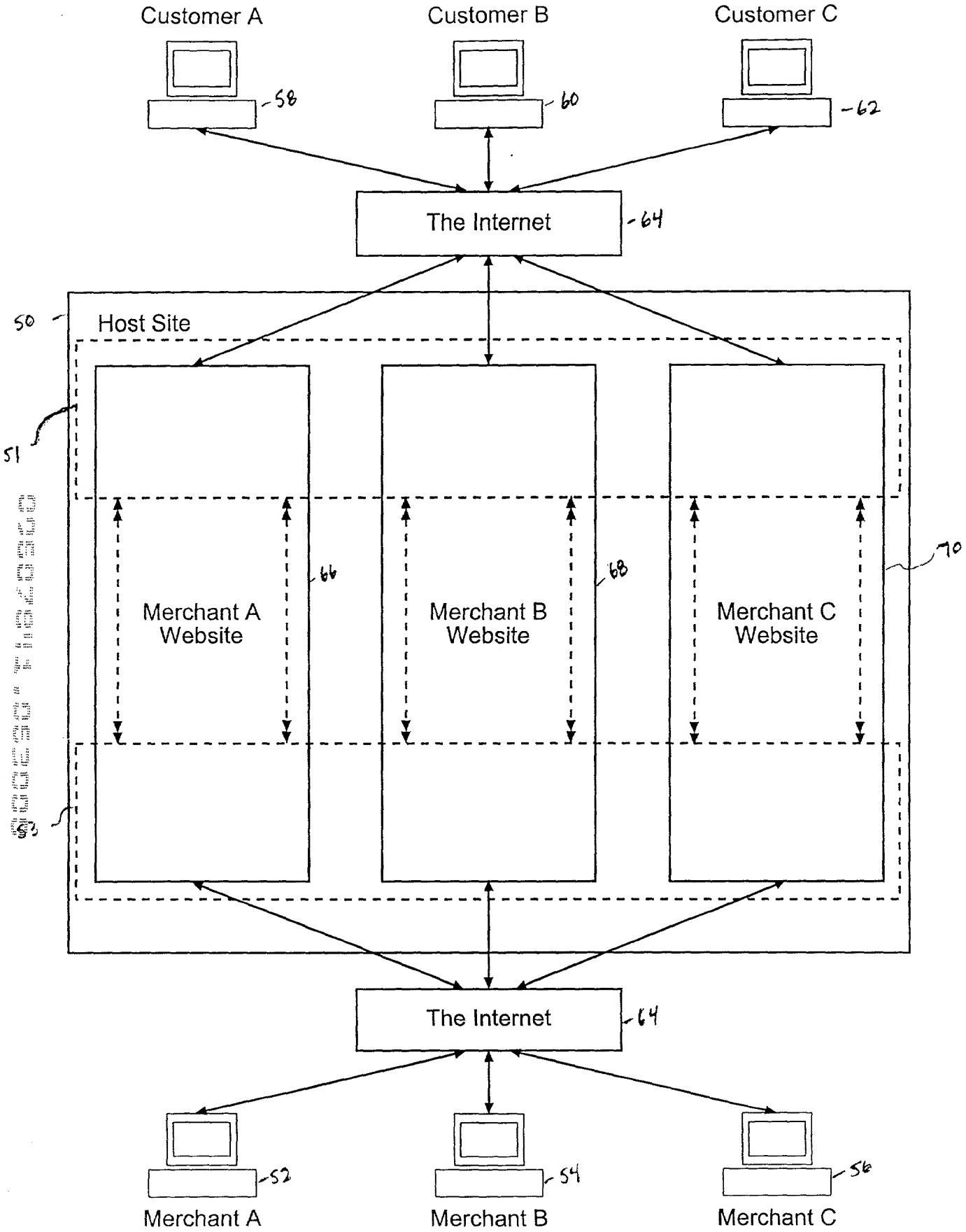
monitoring and recording selections of items by a user for prospective purchase;

generating a list of items which is responsive to at least one of (1) submission by the user of a query for searching the catalog, and (2) selection by the user of an item category for viewing; and

presenting the list of items to the user together with corresponding quantities values which indicate quantities of items selected for prospective purchase;

the method thereby allowing the user to browse the catalog while keeping track of the items selected for prospective purchase and their respective quantities.

14. The method as in Claim 13, wherein the step of presenting the list comprises displaying a form in which the quantity values are displayed in item-specific fields that can be edited by the user, so that the user can modify the quantities while viewing the list.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Customer B
Customer C
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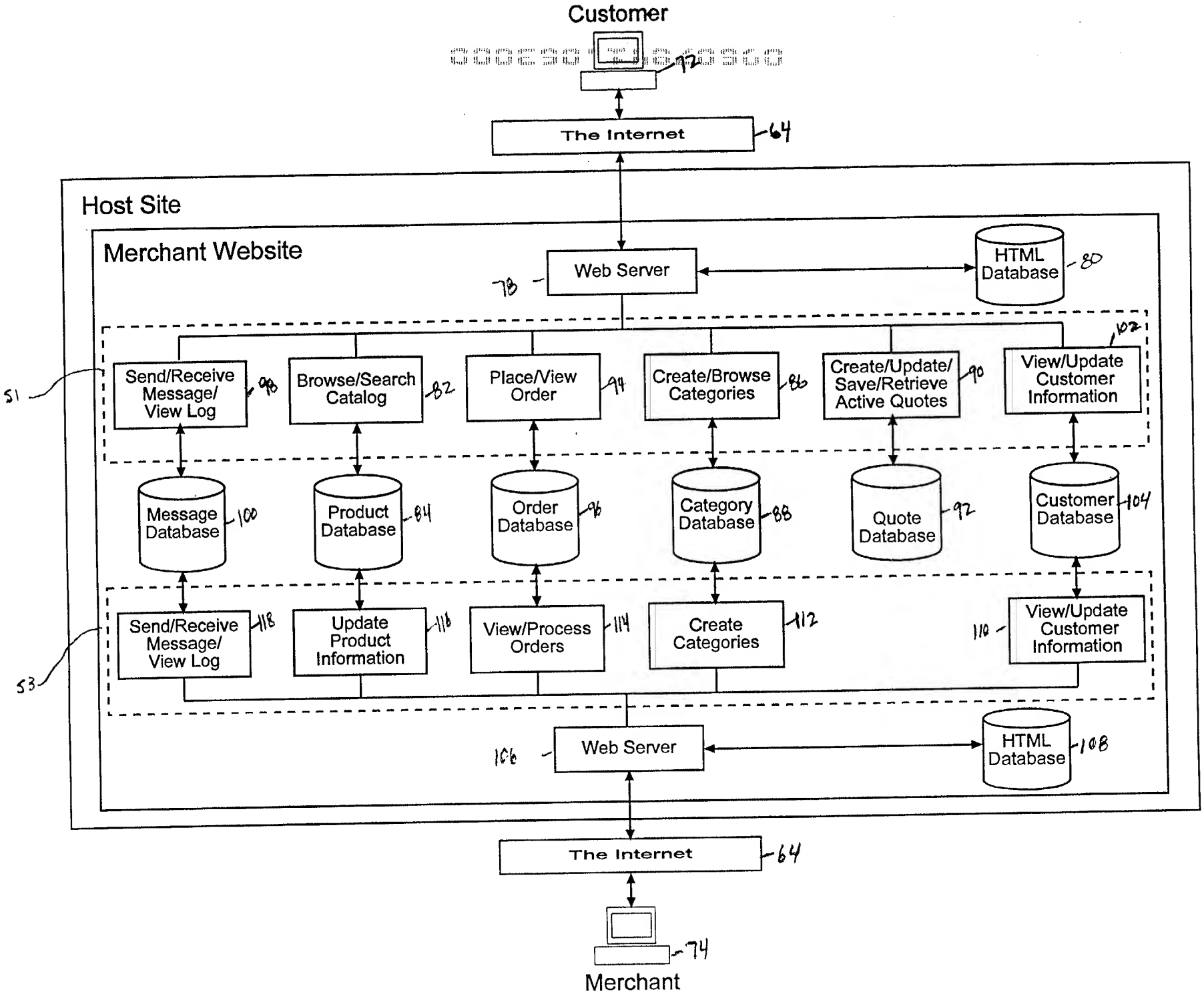
60
62
The Internet
64
50
Host Site
51
53
Merchant A Website
Merchant B Website
Merchant C Website
66
68
70
The Internet
64
52
54
56
Merchant A
Merchant B
Merchant C

Fig. 1


Customer
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The Internet
64
Host Site
Merchant Website
Web Server
78
HTML Database
80
Send/Receive Message/ View Log
98
Browse/Search Catalog
82
Place/View Order
94
Create/Browse Categories
86
Create/Update/ Save/Retrieve Active Quotes
90
View/Update Customer Information
102
51
Message Database
100
Product Database
84
Order Database
96
Category Database
88
Quote Database
92
Customer Database
104
Send/Receive Message/ View Log
118
Update Product Information
116
View/Process Orders
114
Create Categories
112
View/Update Customer Information
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53
Web Server
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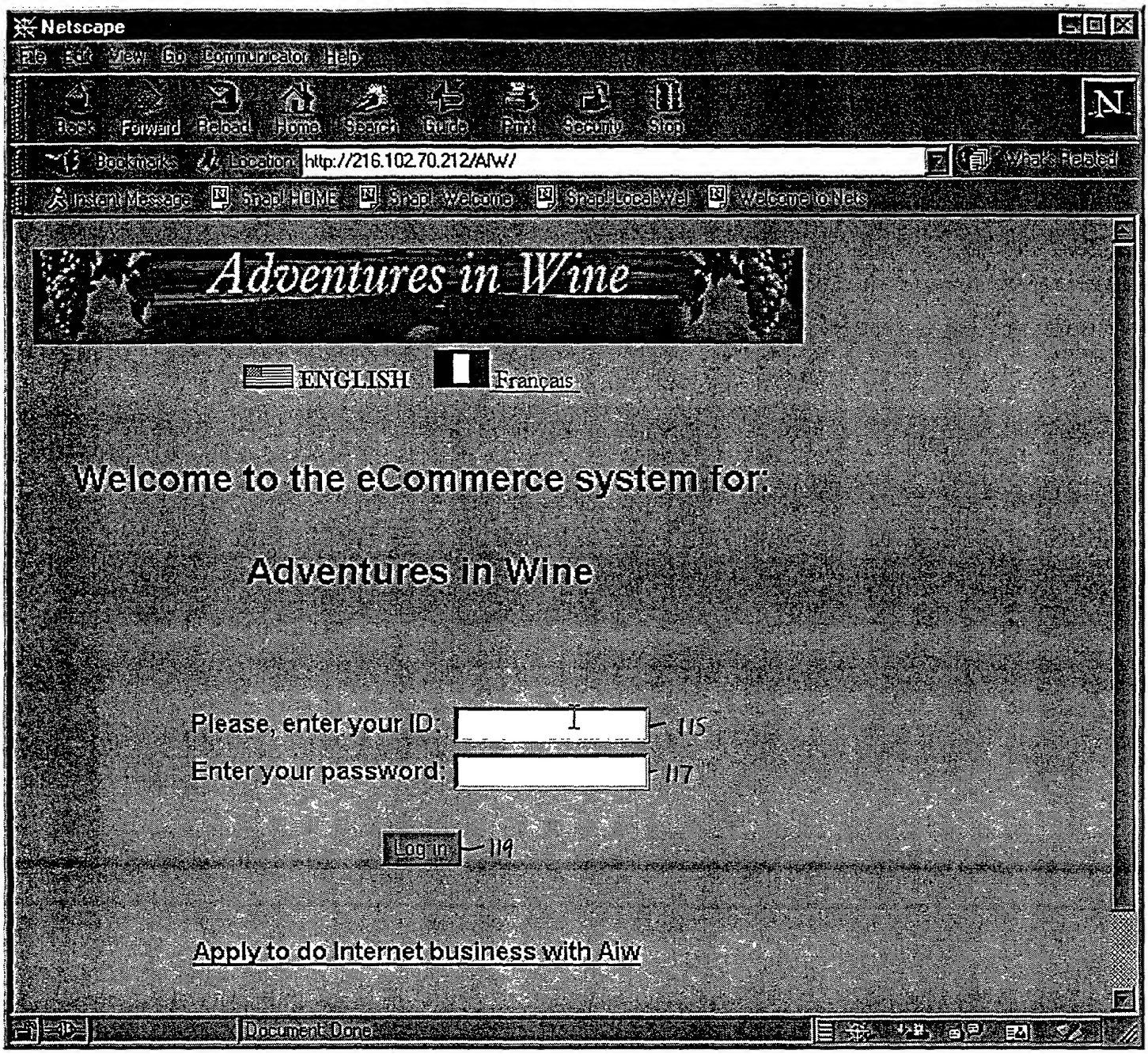
HTML Database
108
The Internet
64
74
Merchant

Fig. 2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Back Forward Reload Home Search Guide Print Security Stop
Bookmarks Location: http://216.102.70.212/AIW/
What's Related
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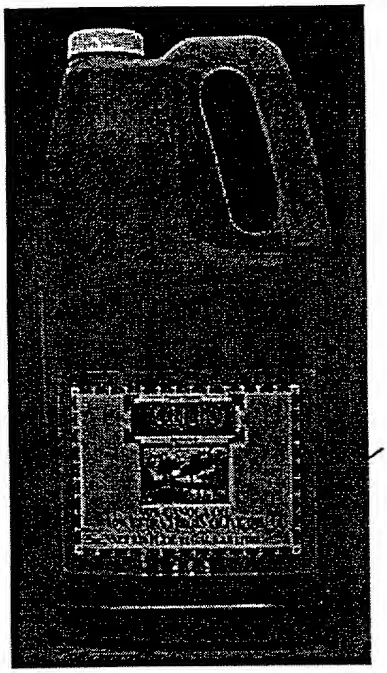
Adventures in Wine
ENGLISH
Français
Welcome to the eCommerce system for:
Adventures in Wine
Please, enter your ID:
115
Enter your password:
117
Log in
119
Apply to do Internet business with Aiw
Document Done

FIG. 3



101

CELIO BLENDED OIL 10/90 1 GAL

Availability In Stock

99

Price ea. $7.95

6 X 1 GAL/CS

Quantity in your Active-Quote™: 12

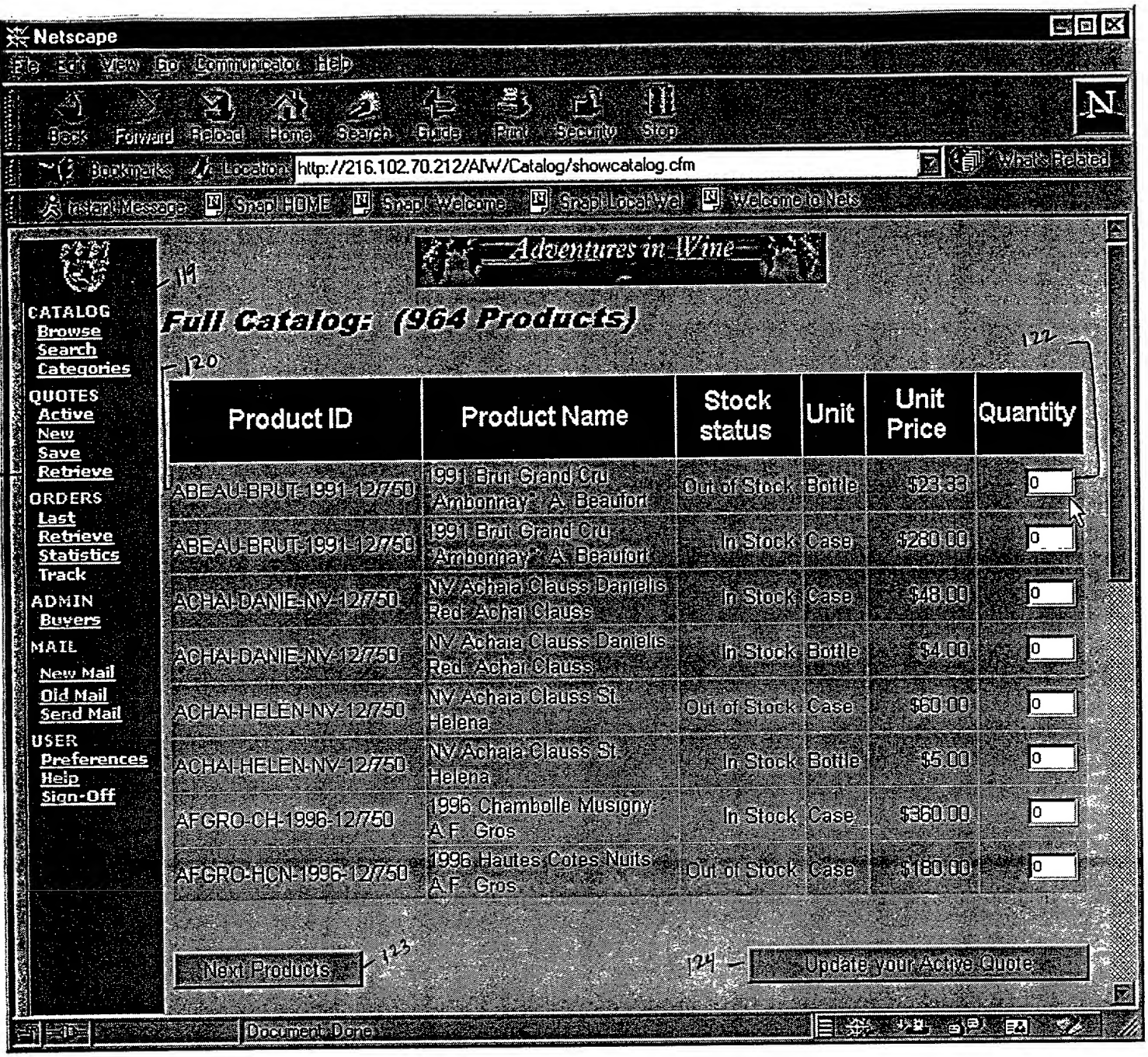
103

Update your Active-Quote™

105

<< G O B A C K <<

FIG. 3A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Back Forward Reload Home Search Guide Print Security Stop
Bookmarks Location: http://216.102.70.212/AIW/Catalog/showcatalog.cfm
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Adventures in Wine
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Search
Categories
QUOTES
Active
New
Save
Retrieve
ORDERS
Last
Retrieve
Statistics
Track
ADMIN
Buyers
MAIL
New Mail
Old Mail
Send Mail
USER
Preferences
Help
Sign-Off
Full Catalog: (964 Products)
Product ID
Product Name
Stock status
Unit
Unit Price
Quantity
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1991 Brut Grand Cru Ambonnay: A. Beaufort
Out of Stock
Bottle
$23.33
ABEAU-BRUT-1991-12/750
1991 Brut Grand Cru Ambonnay: A. Beaufort
In Stock
Case
$280.00
ACHAI-DANIE-NV-12/750
NV Achaia Clauss Danielis Red: Achai Clauss
In Stock
Case
$48.00
ACHAI-DANIE-NV-12/750
NV Achaia Clauss Danielis Red: Achai Clauss
In Stock
Bottle
$4.00
ACHAI-HELEN-NV-12/750
NV Achaia Clauss St. Helena
Out of Stock
Case
$60.00
ACHAI-HELEN-NV-12/750
NV Achaia Clauss St. Helena
In Stock
Bottle
$5.00
AFGRO-CH-1996-12/750
1996 Chambolle Musigny: A.F. Gros
In Stock
Case
$360.00
AFGRO-HCN-1996-12/750
1996 Hautes Cotes Nuits: A.F. Gros
Out of Stock
Case
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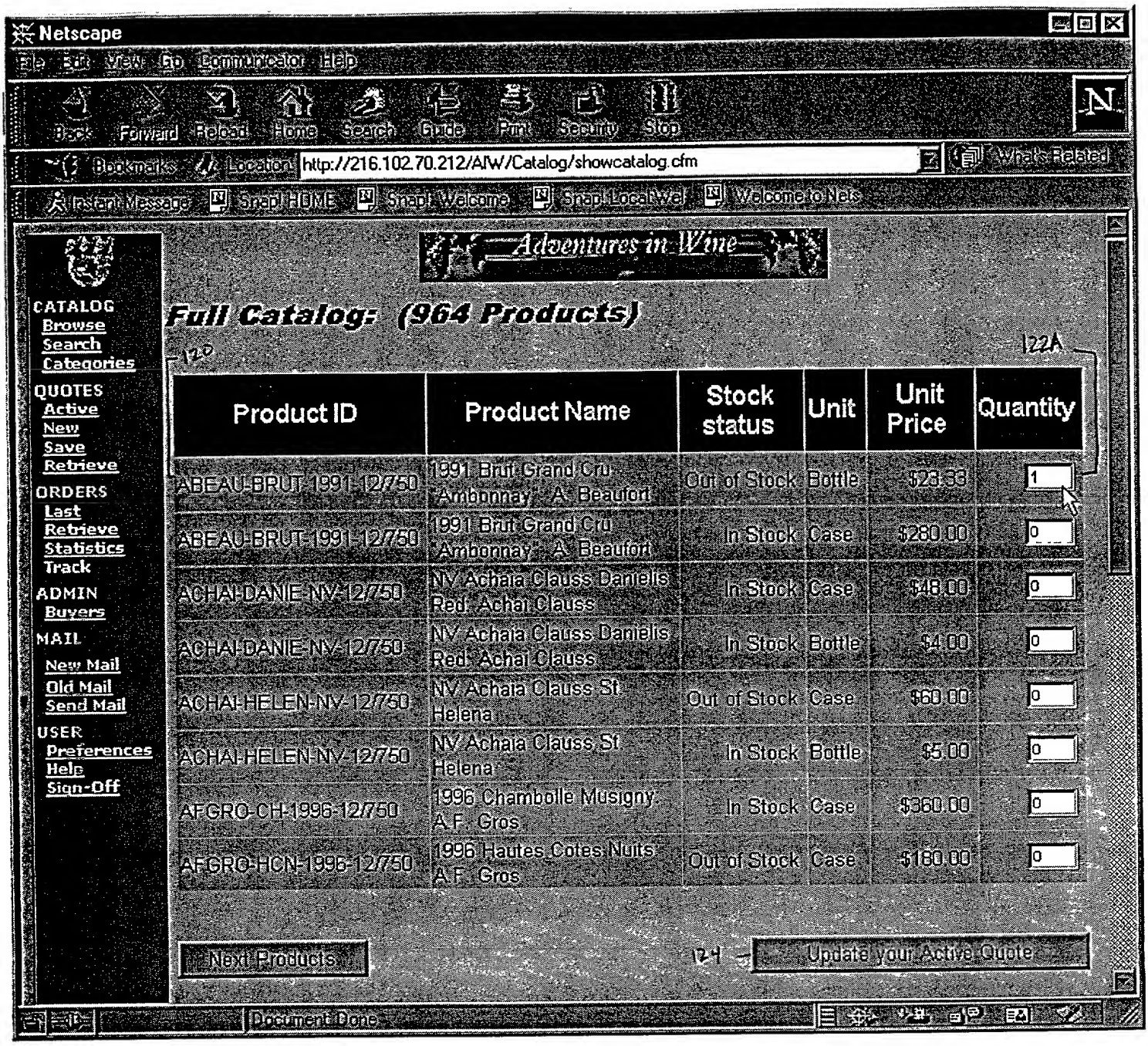
Next Products
Update your Active Quote
Document Done
119
120
122
123
124
139

FIG. 4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Adventures in Wine
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Browse
Search
Categories
QUOTES
Active
New
Save
Retrieve
ORDERS
Last
Retrieve
Statistics
Track
ADMIN
Buyers
MAIL
New Mail
Old Mail
Send Mail
USER
Preferences
Help
Sign-Off
Full Catalog: (964 Products)
120
122A
Product ID
Product Name
Stock status
Unit
Unit Price
Quantity
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1991 Brut Grand Cru "Ambonnay" A. Beaufort
Out of Stock
Bottle
$23.33
1
ABEAU-BRUT-1991-12/750
1991 Brut Grand Cru "Ambonnay" A. Beaufort
In Stock
Case
$280.00
0
ACHAI-DANIE-NV-12/750
NV Achaia Clauss Danielis Red Achai Clauss
In Stock
Case
$48.00
0
ACHAI-DANIE-NV-12/750
NV Achaia Clauss Danielis Red Achai Clauss
In Stock
Bottle
$4.00
0
ACHAI-HELEN-NV-12/750
NV Achaia Clauss St Helena
Out of Stock
Case
$60.00
0
ACHAI-HELEN-NV-12/750
NV Achaia Clauss St Helena
In Stock
Bottle
$5.00
0
AFGRO-CH-1996-12/750
1996 Chambolle Musigny A.F. Gros
In Stock
Case
$360.00
0
AFGRO-HCN-1996-12/750
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Out of Stock
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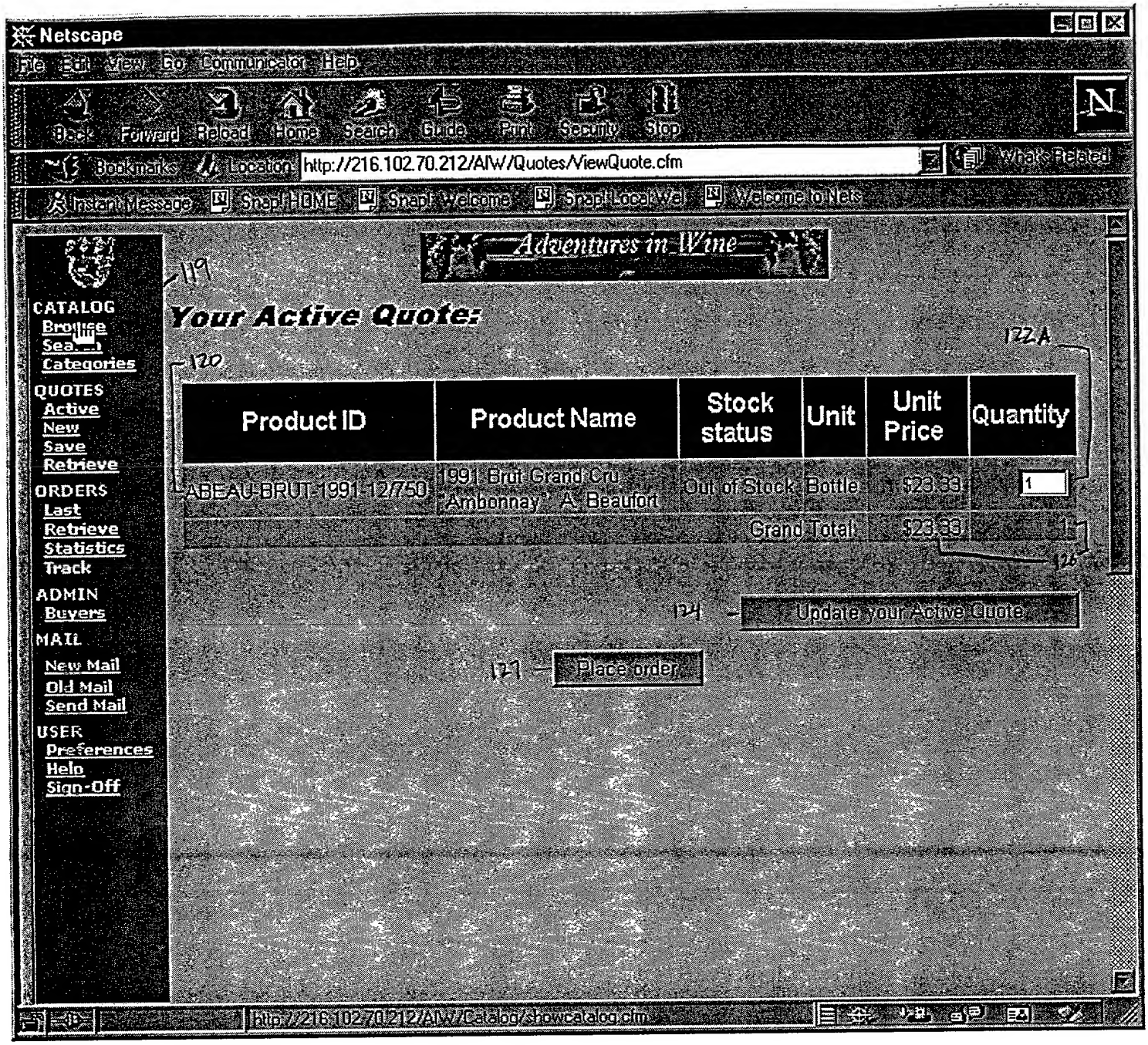
Update your Active Quote
Document Done

Fig 5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119
Your Active Quote:
120
122A
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Browse
Sea...
Categories
QUOTES
Active
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Save
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ORDERS
Last
Retrieve
Statistics
Track
ADMIN
Buyers
MAIL
New Mail
Old Mail
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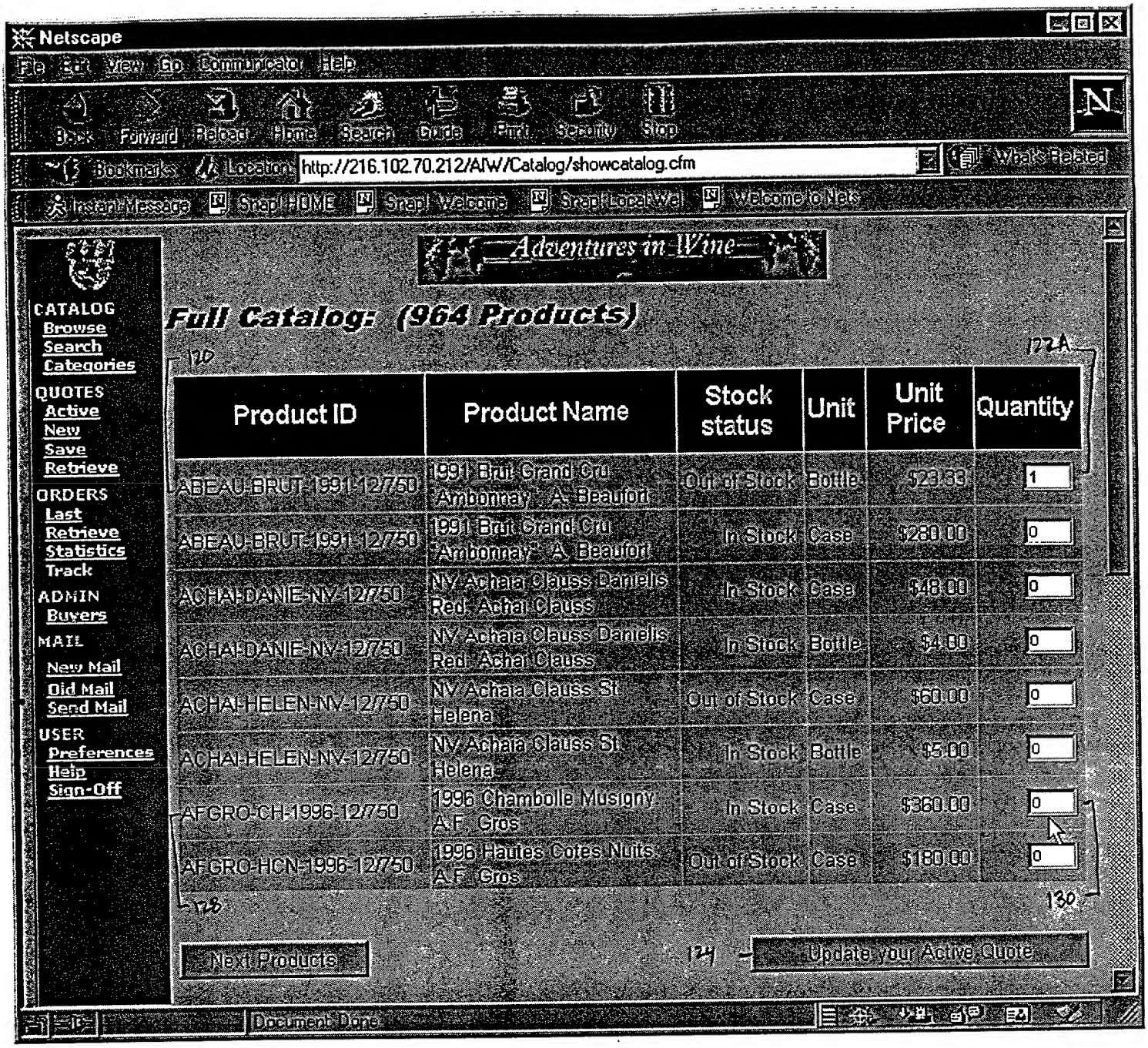
USER
Preferences
Help
Sign-Off
Product ID
Product Name
Stock status
Unit
Unit Price
Quantity
ABEAU-BRUT-1991-12/750
1991 Brut Grand Cru Ambonnay A. Beaufort
Out of Stock
Bottle
$23.99
1
Grand Total:
$23.99
126
124
Update your Active Quote
121
Place order
http://216.102.70.212/AIW/Catalog/showcatalog.cfm

FIG. 6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1
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1991 Brut Grand Cru "Ambonnay" A. Beaufort
In Stock
Case
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ACHAI-DANIE-NV-12/750
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In Stock
Case
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Bottle
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0
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NV Achaia Clauss St Helena
Out of Stock
Case
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0
ACHAI-HELEN-NV-12/750
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In Stock
Bottle
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In Stock
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0
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Out of Stock
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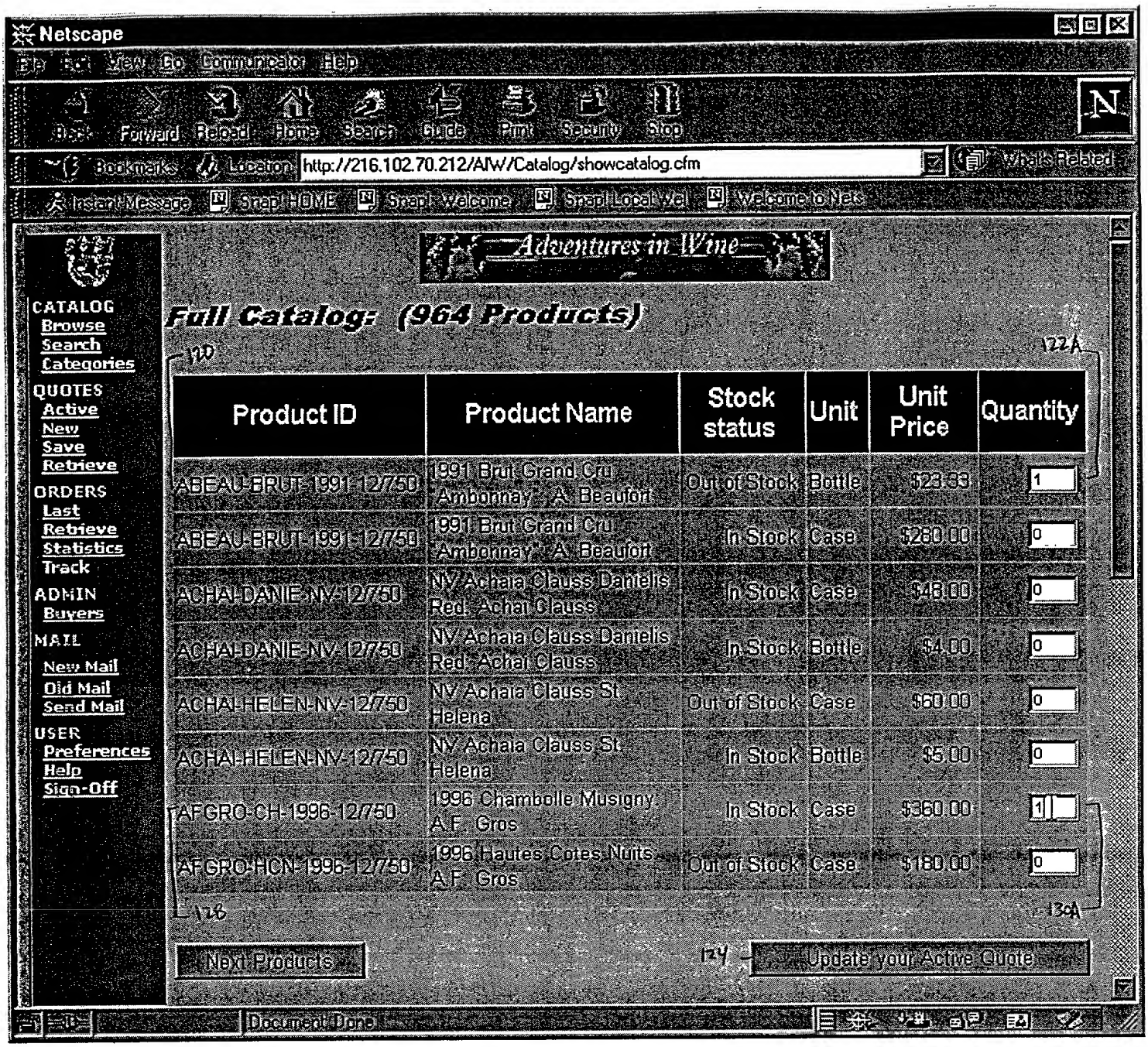
0
128
130
Next Products
124
Update your Active Quote
Document Done

Fig 7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Product Name
Stock status
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Unit Price
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Out of Stock
Bottle
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1
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1991 Brut Grand Cru "Ambonnay" A. Beaufort
In Stock
Case
$280.00
0
ACHAI-DANIE-NV-12/750
NV Achaia Clauss Danielis Red "Achai Clauss"
In Stock
Case
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ACHAI-DANIE-NV-12/750
NV Achaia Clauss Danielis Red "Achai Clauss"
In Stock
Bottle
$4.00
0
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NV Achaia Clauss St. Helena
Out of Stock
Case
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0
ACHAI-HELEN-NV-12/750
NV Achaia Clauss St. Helena
In Stock
Bottle
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0
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In Stock
Case
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AFGRO-HCN-1996-12/750
1996 Hautes Cotes Nuits A.F. Gros
Out of Stock
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Next Products
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Update your Active Quote
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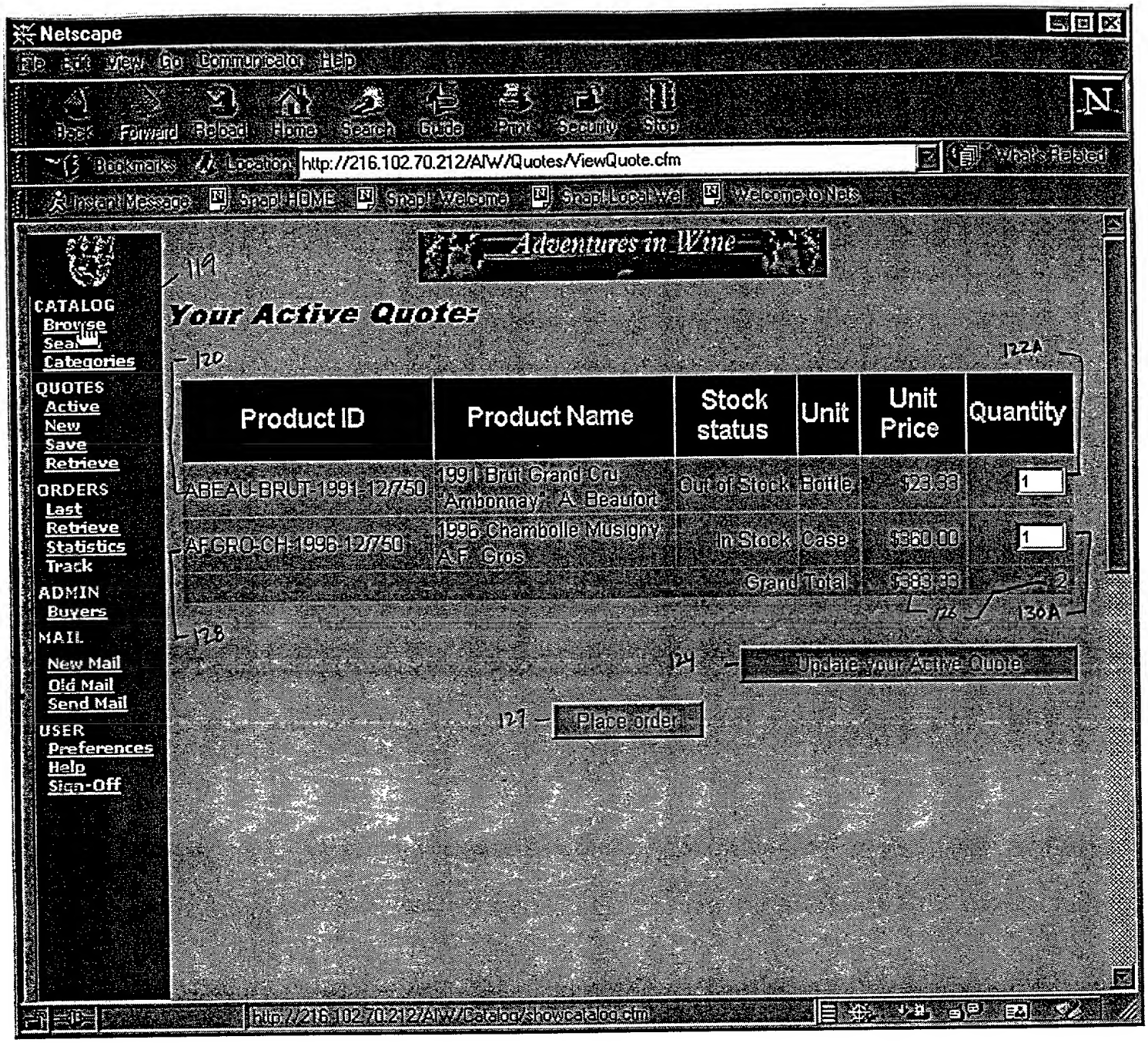
FIG. 8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QUOTES
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Retrieve
ORDERS
Last
Retrieve
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ADMIN
Buyers
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Send Mail
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Preferences
Help
Sign-Off
Your Active Quote:
Product ID
Product Name
Stock status
Unit
Unit Price
Quantity
ABEAU-BRUT-1991-12/750
1991 Brut Grand Cru "Ambonnay" A. Beaufort
Out of Stock
Bottle
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AFGRO-CH-1996-12/750
1996 Chambolle Musigny A.F. Gros
In Stock
Case
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Grand Total
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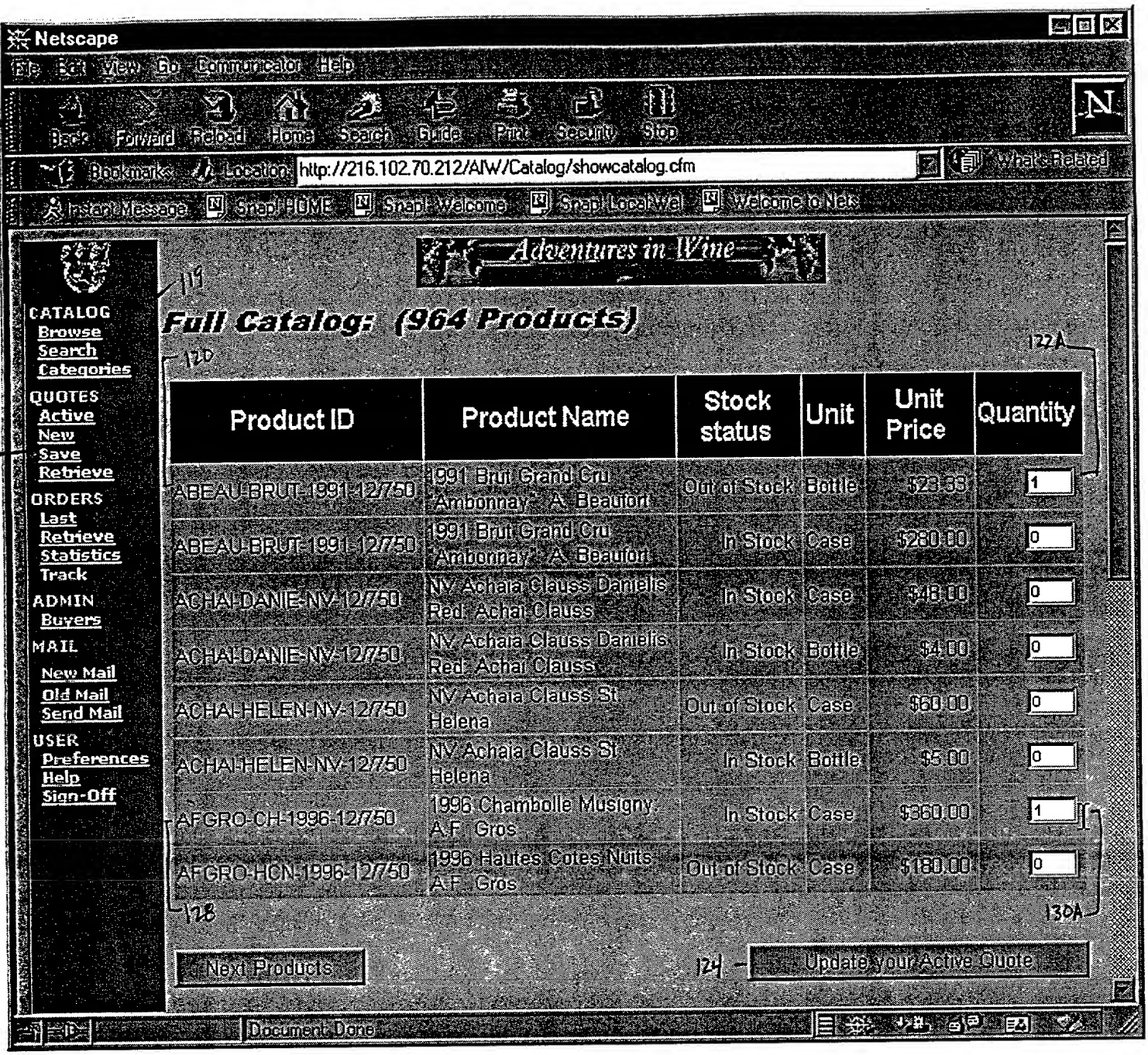
Update Your Active Quote
Place order
http://216.102.70.212/AIW/Catalog/showcatalog.cfm

Fig 9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QUOTES
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Product ID
Product Name
Stock status
Unit
Unit Price
Quantity
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1991 Brut Grand Cru Ambonnay - A. Beaufort
Out of Stock
Bottle
$23.53
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ABEAU-BRUT-1991-12/750
1991 Brut Grand Cru Ambonnay - A. Beaufort
In Stock
Case
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NV Achaia Clauss Danielis Red Achai Clauss
In Stock
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0
ACHAI-DANIE-NV-12/750
NV Achaia Clauss Danielis Red Achai Clauss
In Stock
Bottle
$4.00
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ACHAI-HELEN-NV-12/750
NV Achaia Clauss St Helena
Out of Stock
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ACHAI-HELEN-NV-12/750
NV Achaia Clauss St Helena
In Stock
Bottle
$5.00
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AFGRO-CH-1996-12/750
1996 Chambolle Musigny A.F. Gros
In Stock
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AFGRO-HCN-1996-12/750
1996 Hautes Cotes Nuits A.F. Gros
Out of Stock
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Next Products
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120
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130A
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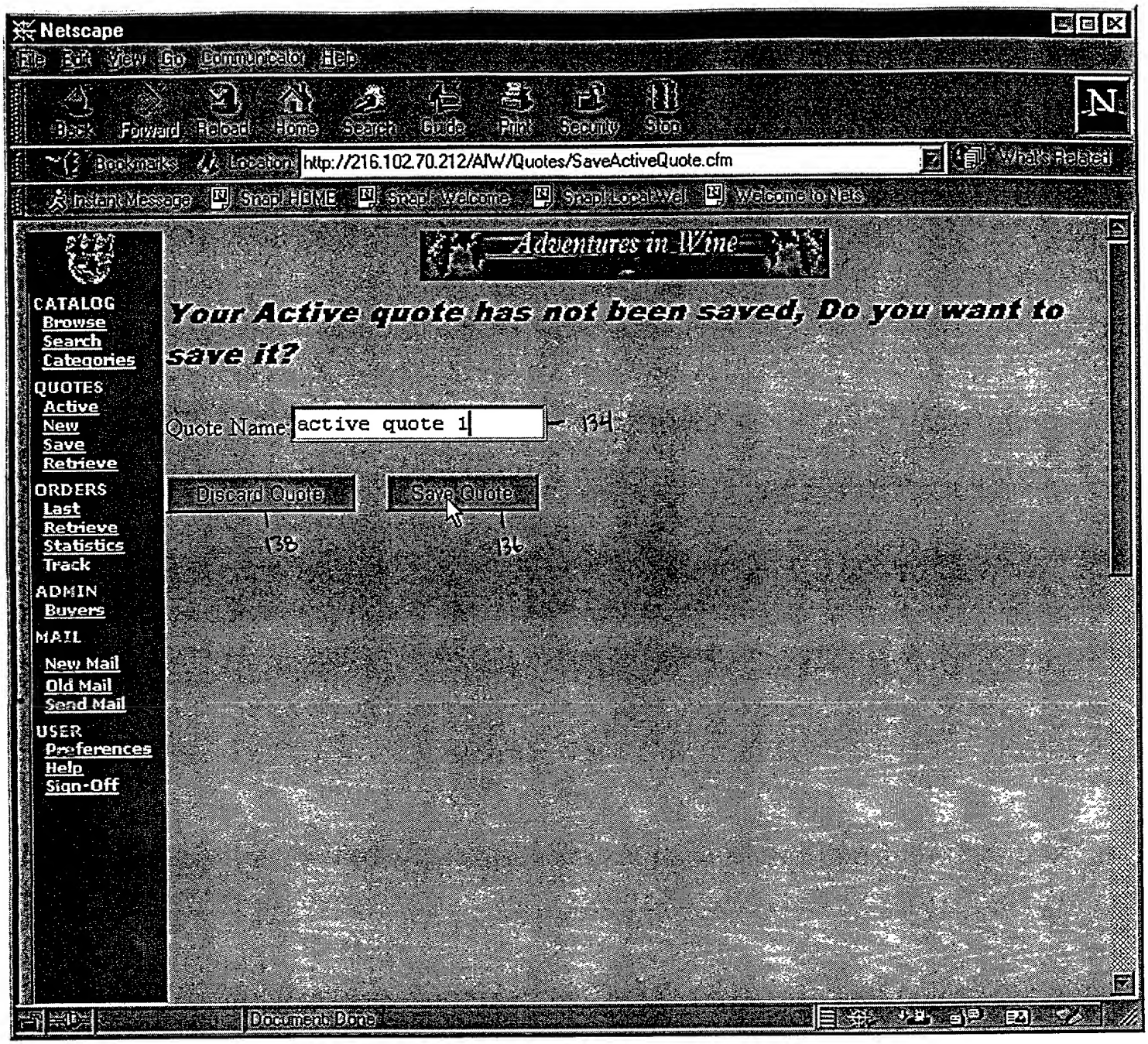
Fig. 10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ORDERS
Last
Retrieve
Statistics
Track
ADMIN
Buyers
MAIL
New Mail
Old Mail
Send Mail
USER
Preferences
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134
Discard Quote
Save Quote
138
136
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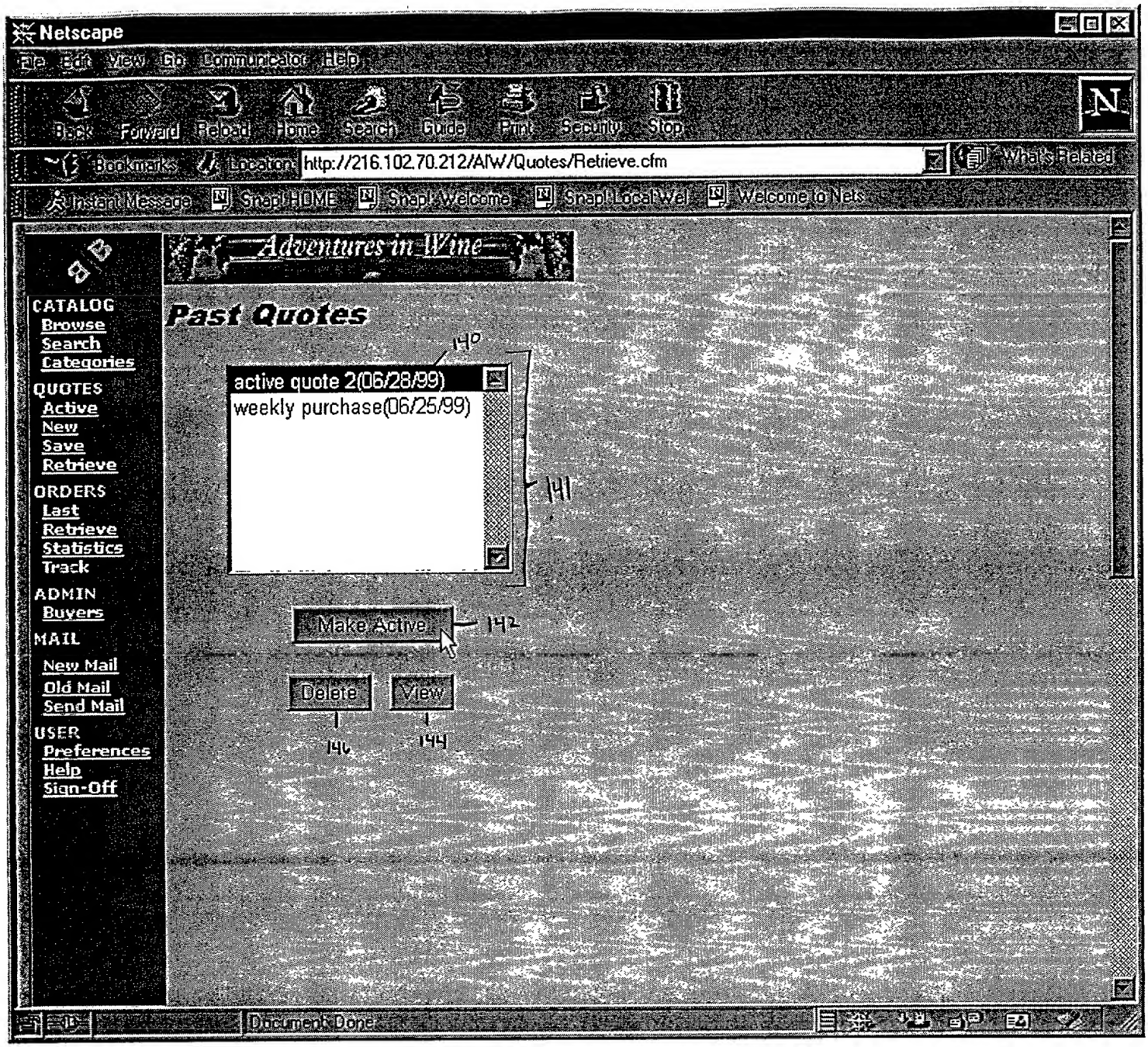
Fig 11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MAIL
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Preferences
Help
Sign-Off
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weekly purchase(06/25/99)
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Make Active
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View
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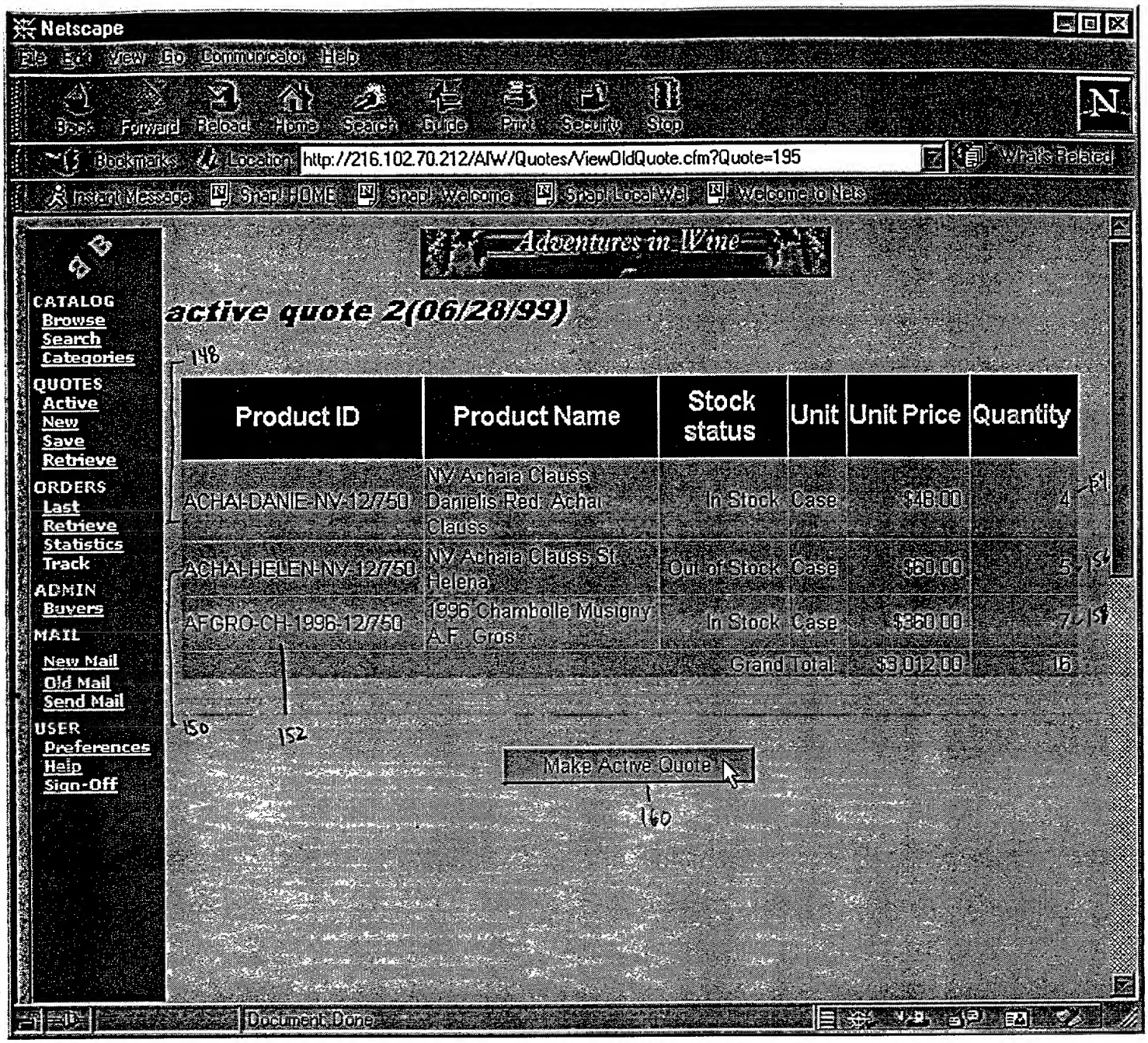
Fig. 12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Product Name
Stock status
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154
ACHAI-HELEN-NV-12/750
NV Achaia Clauss St. Helena
Out of Stock
Case
$60.00
5
156
AFGRO-CH-1996-12/750
1996 Chambolle Musigny A.F. Gros
In Stock
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158
Grand Total
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16
150
152
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160
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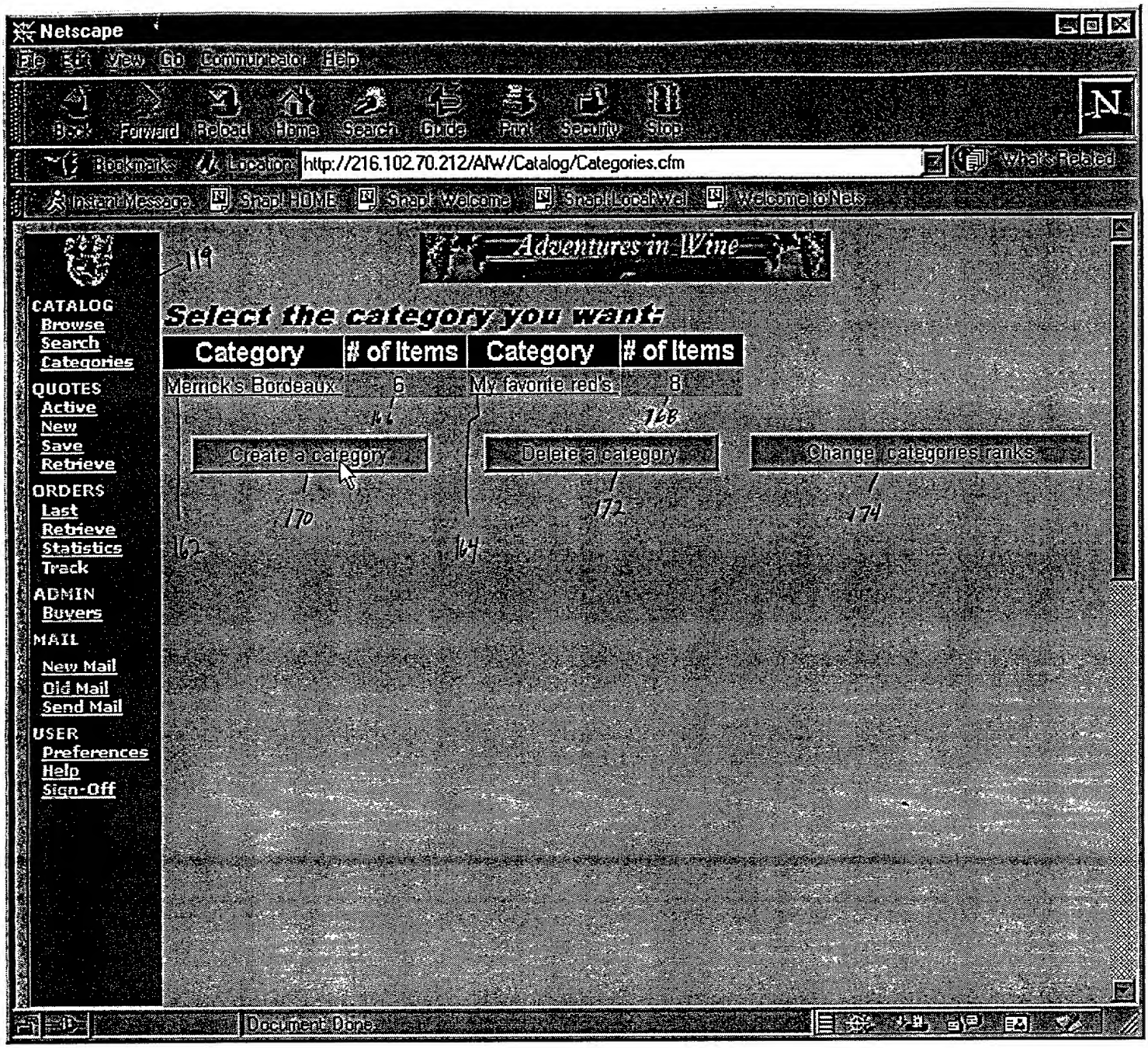
Fig. 13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Save
Retrieve
ORDERS
Last
Retrieve
Statistics
Track
ADMIN
Buyers
MAIL
New Mail
Old Mail
Send Mail
USER
Preferences
Help
Sign-Off
119
Select the category you want:
Category
# of Items
Category
# of Items
Merrick's Bordeaux
6
My favorite red's
8
Create a category
Delete a category
Change categories ranks
162
164
166
168
170
172
174
Document Done

Fig 14

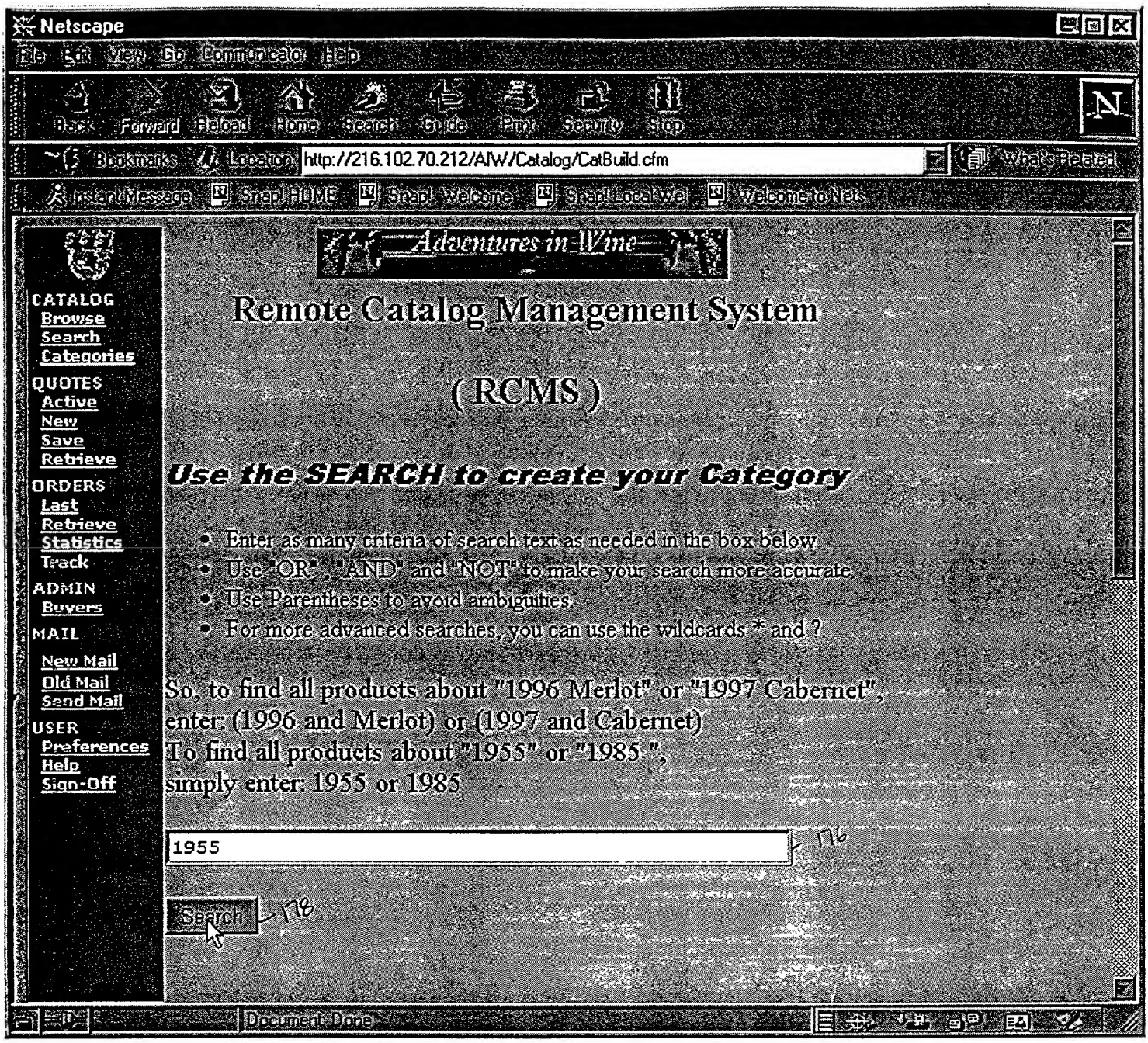

Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Guide Print Security Stop
Bookmarks Location: http://216.102.70.212/AIW/Catalog/CatBuild.cfm
What's Related
Instant Message Snap! HOME Snap! Welcome Snap! Local Wel Welcome to Nets
Adventures in Wine
CATALOG
Browse
Search
Categories
QUOTES
Active
New
Save
Retrieve
ORDERS
Last
Retrieve
Statistics
Track
ADMIN
Buyers
MAIL
New Mail
Old Mail
Send Mail
USER
Preferences
Help
Sign-Off
Remote Catalog Management System
(RCMS)
Use the SEARCH to create your Category
• Enter as many criteria of search text as needed in the box below
• Use "OR", "AND" and "NOT" to make your search more accurate
• Use Parentheses to avoid ambiguities
• For more advanced searches, you can use the wildcards * and ?
So, to find all products about "1996 Merlot" or "1997 Cabernet",
enter: (1996 and Merlot) or (1997 and Cabernet)
To find all products about "1955" or "1985",
simply enter: 1955 or 1985
1955
176
Search
178
Document Done

Fig 15

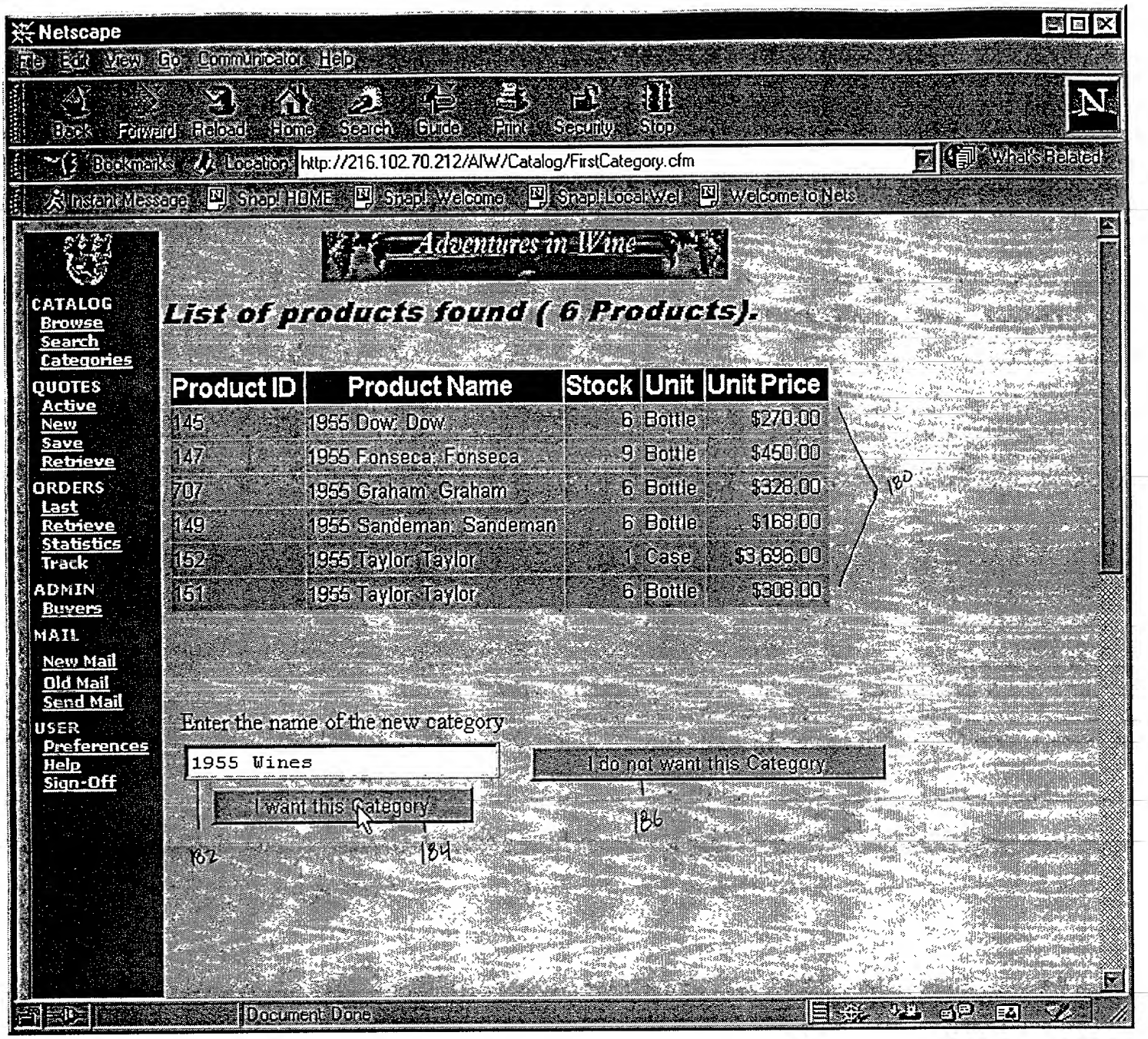

Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Guide Print Security Stop
Bookmarks Location http://216.102.70.212/AIW/Catalog/FirstCategory.cfm
What's Related
Instant Message Snap! HOME Snap! Welcome Snap! Local Wel Welcome to Nets
Adventures in Wine
CATALOG
Browse
Search
Categories
QUOTES
Active
New
Save
Retrieve
ORDERS
Last
Retrieve
Statistics
Track
ADMIN
Buyers
MAIL
New Mail
Old Mail
Send Mail
USER
Preferences
Help
Sign-Off
List of products found (6 Products).
Product ID | Product Name | Stock | Unit | Unit Price
145 | 1955 Dow: Dow | 6 | Bottle | $270.00
147 | 1955 Fonseca: Fonseca | 9 | Bottle | $450.00
707 | 1955 Graham: Graham | 6 | Bottle | $328.00
149 | 1955 Sandeman: Sandeman | 6 | Bottle | $168.00
152 | 1955 Taylor: Taylor | 1 | Case | $3,696.00
151 | 1955 Taylor: Taylor | 6 | Bottle | $308.00
180
Enter the name of the new category
1955 Wines
I want this Category
I do not want this Category
182
184
186
Document: Done

Fig. 1b

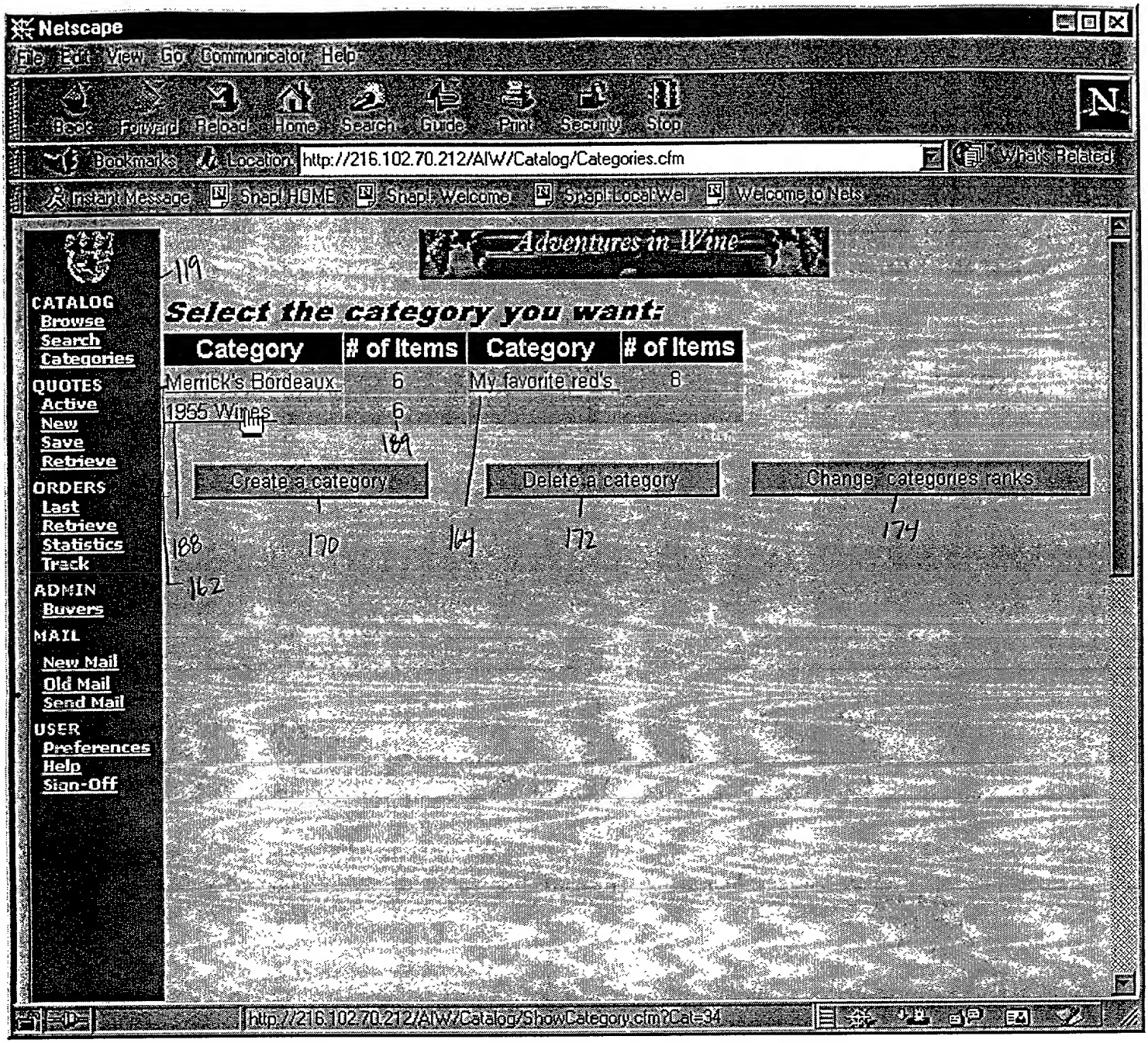

Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Guide Print Security Stop
Bookmarks Location http://216.102.70.212/AIW/Catalog/Categories.cfm
What's Related
Instant Message Snap! HOME Snap! Welcome Snap! LocalWel Welcome to Nets
Adventures in Wine
119
CATALOG
Browse
Search
Categories
QUOTES
Active
New
Save
Retrieve
ORDERS
Last
Retrieve
Statistics
Track
ADMIN
Buyers
MAIL
New Mail
Old Mail
Send Mail
USER
Preferences
Help
Sign-Off
Select the category you want:
Category
# of Items
Category
# of Items
Merrick's Bordeaux
6
My favorite red's
8
1955 Wines
6
189
Create a category
Delete a category
Change categories ranks
188
170
164
172
174
162
http://216.102.70.212/AIW/Catalog/ShowCategory.cfm?Cat=34

Fig 17

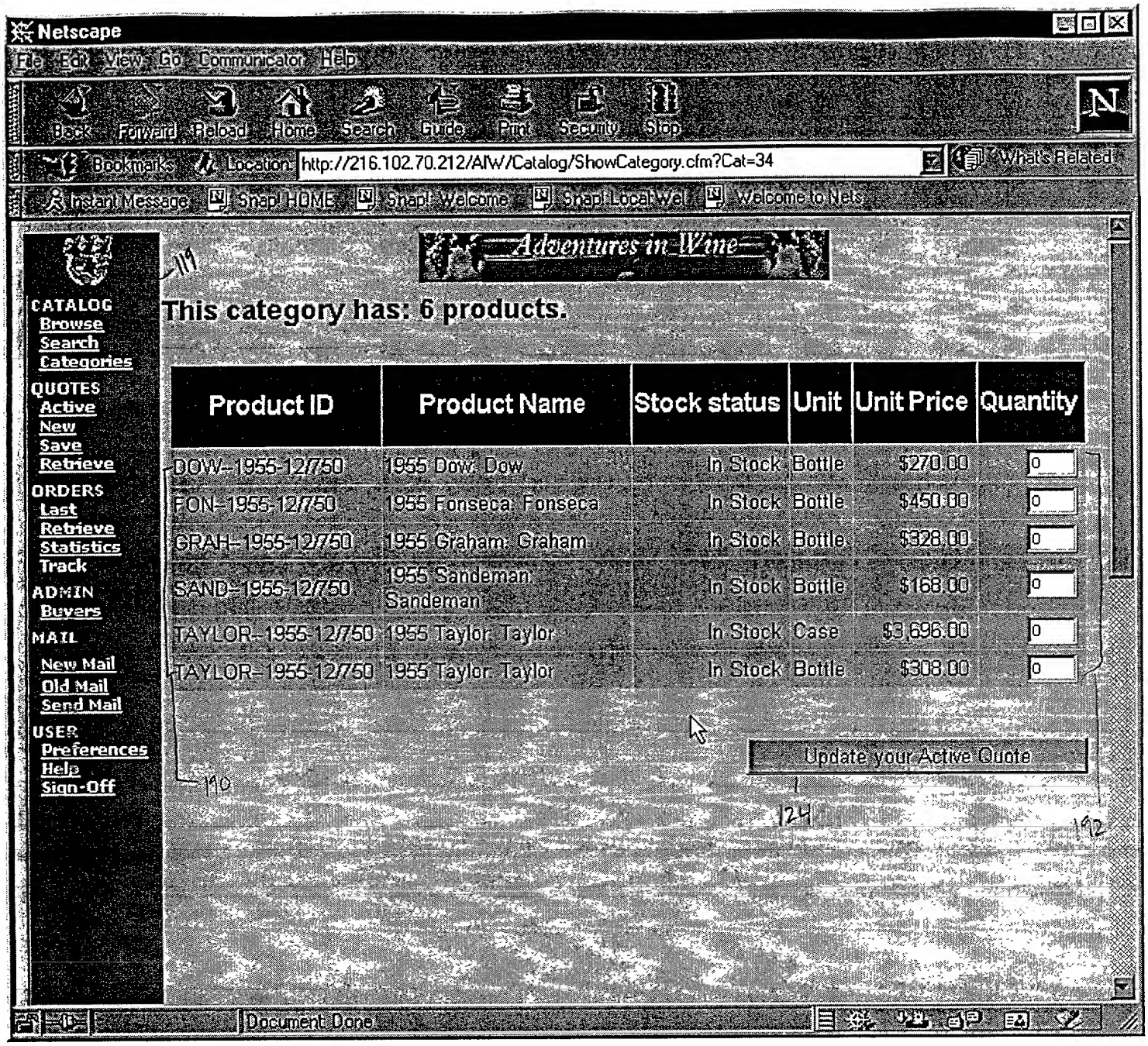
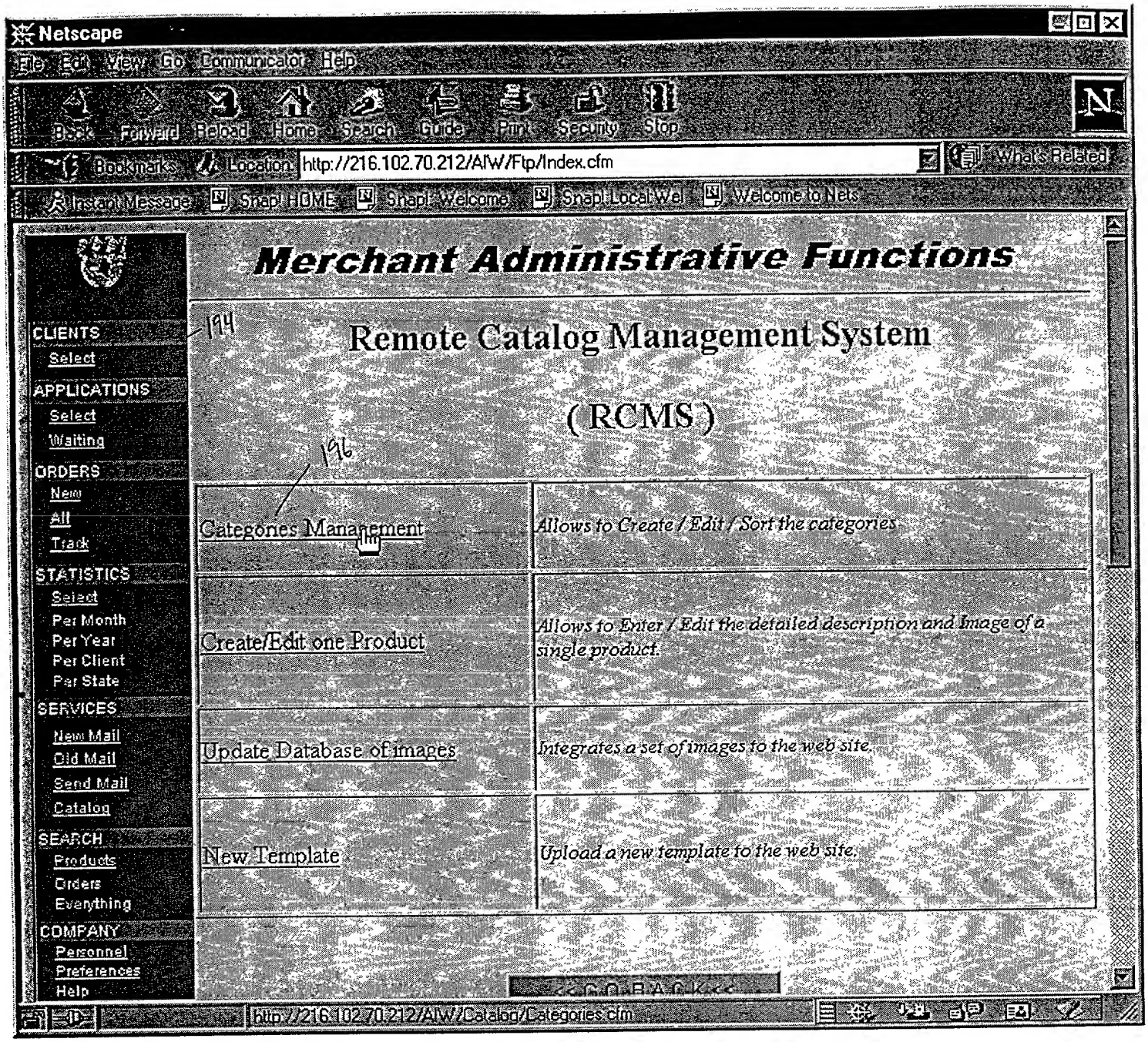

Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Guide Print Security Stop
Bookmarks Location: http://216.102.70.212/AIW/Catalog/ShowCategory.cfm?Cat=34
What's Related
Instant Message Snap! HOME Snap! Welcome Snap! Local Wel Welcome to Nets
Adventures in Wine
CATALOG
Browse
Search
Categories
QUOTES
Active
New
Save
Retrieve
ORDERS
Last
Retrieve
Statistics
Track
ADMIN
Buyers
MAIL
New Mail
Old Mail
Send Mail
USER
Preferences
Help
Sign-Off
This category has: 6 products.
Product ID
Product Name
Stock status
Unit
Unit Price
Quantity
DOW-1955-12/750 1955 Dow: Dow In Stock Bottle $270.00 0
FON-1955-12/750 1955 Fonseca: Fonseca In Stock Bottle $450.00 0
GRAH-1955-12/750 1955 Graham: Graham In Stock Bottle $328.00 0
SAND-1955-12/750 1955 Sandeman: Sandeman In Stock Bottle $168.00 0
TAYLOR-1955-12/750 1955 Taylor: Taylor In Stock Case $3,696.00 0
TAYLOR-1955-12/750 1955 Taylor: Taylor In Stock Bottle $308.00 0
Update your Active Quote
Document Done

Fig 18


Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Guide Print Security Stop
Bookmarks Location: http://216.102.70.212/AIW/Ftp/Index.cfm
What's Related
Instant Message Snap! HOME Snap! Welcome Snap! Local Wel Welcome to Nets
Merchant Administrative Functions
CLIENTS
Select
APPLICATIONS
Select
Waiting
ORDERS
New
All
Track
STATISTICS
Select
Per Month
Per Year
Per Client
Per State
SERVICES
New Mail
Old Mail
Send Mail
Catalog
SEARCH
Products
Orders
Everything
COMPANY
Personnel
Preferences
Help
194
Remote Catalog Management System
(RCMS)
196
Categories Management
Allows to Create / Edit / Sort the categories
Create/Edit one Product
Allows to Enter / Edit the detailed description and Image of a single product.
Update Database of images
Integrates a set of images to the web site.
New Template
Upload a new template to the web site.
<<< BACK
http://216.102.70.212/AIW/Catalog/Categories.cfm

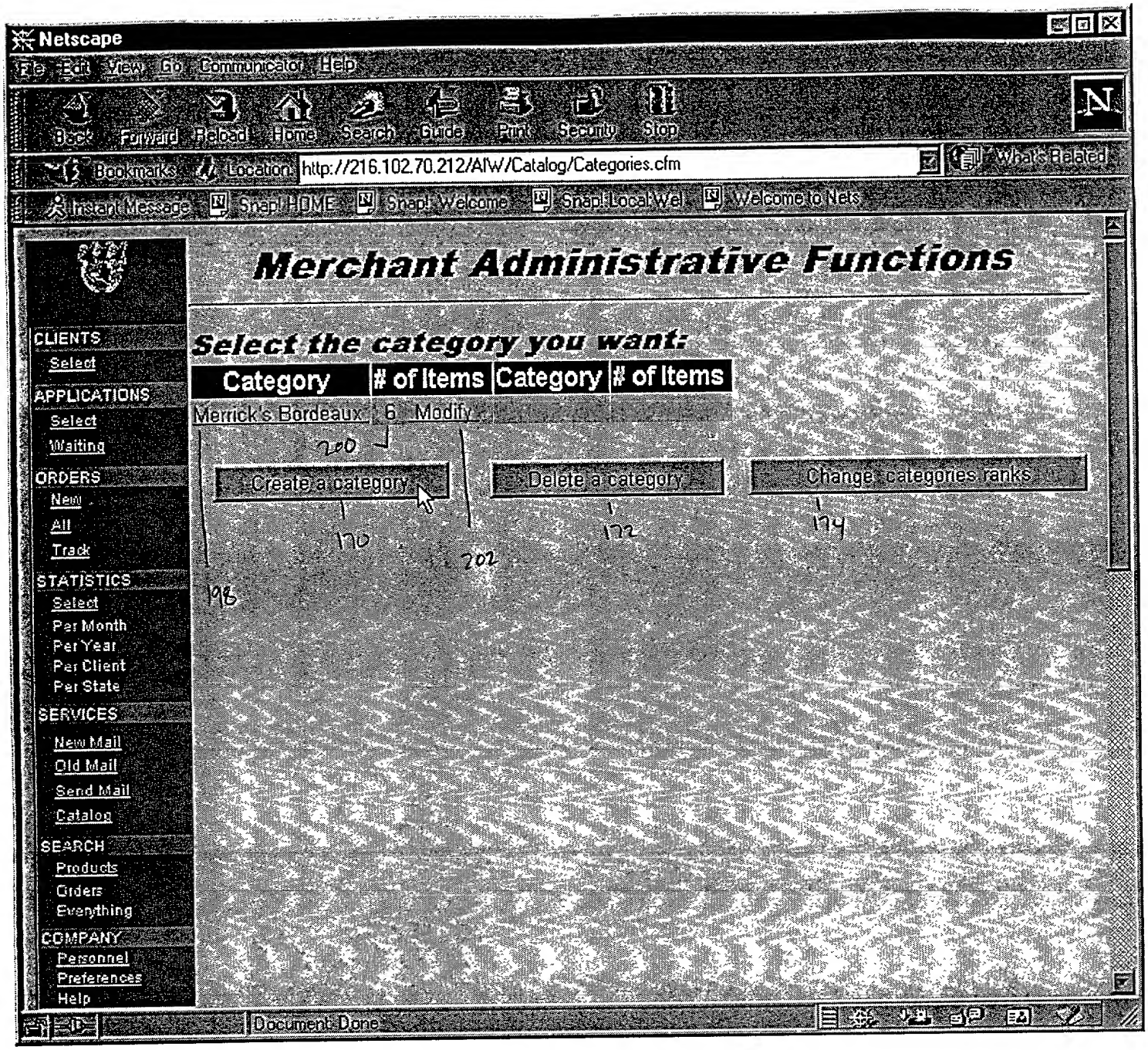
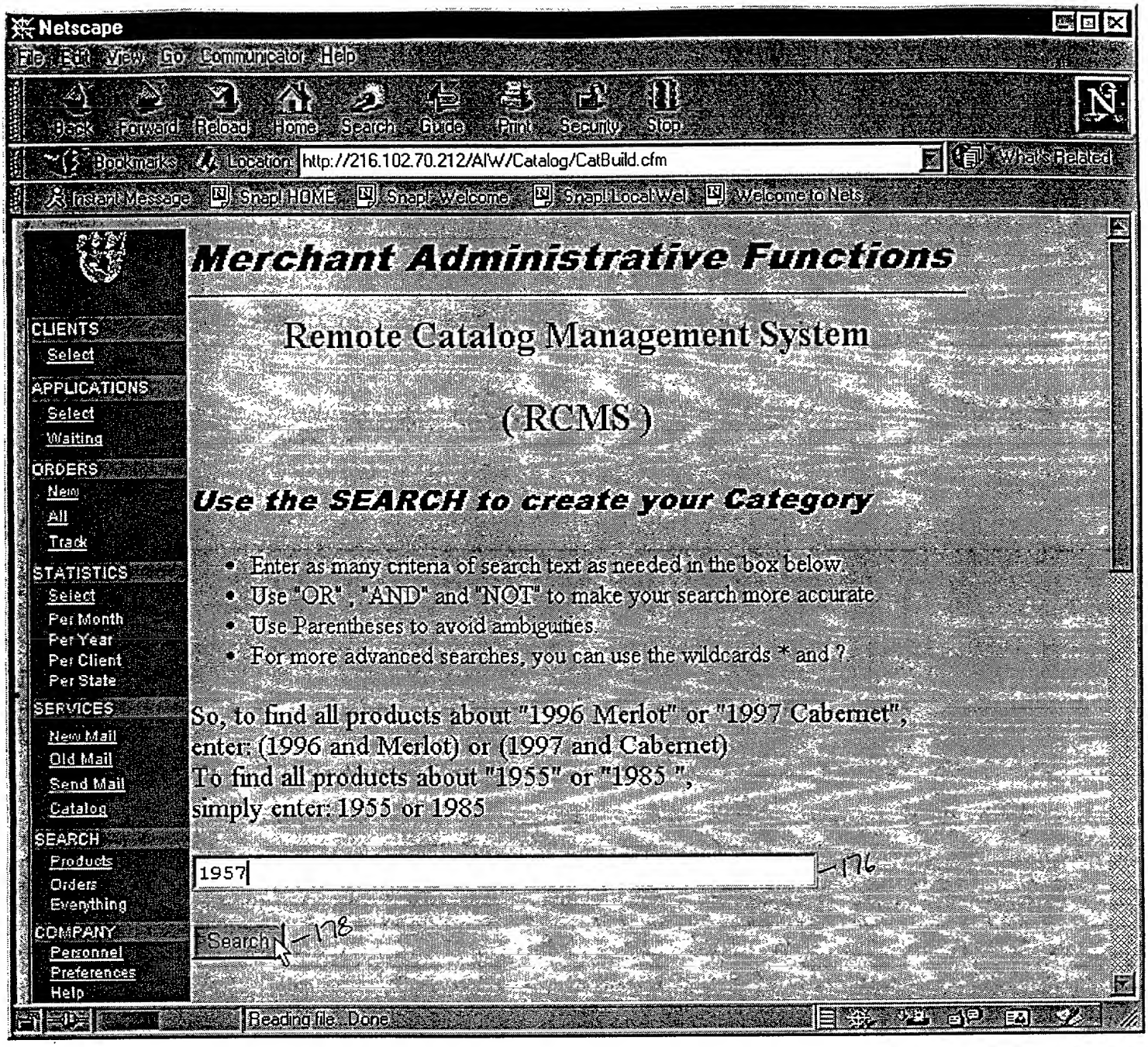

Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Guide Print Security Stop
Bookmarks Location: http://216.102.70.212/AIW/Catalog/Categories.cfm
What's Related
Instant Message Snap! HOME Snap! Welcome Snap! Local Wel Welcome to Nets
Merchant Administrative Functions
CLIENTS
Select
APPLICATIONS
Select
Waiting
ORDERS
New
All
Track
STATISTICS
Select
Per Month
Per Year
Per Client
Per State
SERVICES
New Mail
Old Mail
Send Mail
Catalog
SEARCH
Products
Orders
Everything
COMPANY
Personnel
Preferences
Help
Select the category you want:
Category
# of Items
Category
# of Items
Merrick's Bordeaux
6
Modify
200
Create a category
Delete a category
Change categories ranks
170
172
174
202
196
Document: Done

Fig 20


Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Guide Print Security Stop
Bookmarks Location: http://216.102.70.212/AIW/Catalog/CatBuild.cfm
What's Related
Instant Message Snap! HOME Snap! Welcome Snap! Local Wel Welcome to Nets
CLIENTS
Select
APPLICATIONS
Select
Waiting
ORDERS
New
All
Track
STATISTICS
Select
Per Month
Per Year
Per Client
Per State
SERVICES
New Mail
Old Mail
Send Mail
Catalog
SEARCH
Products
Orders
Everything
COMPANY
Personnel
Preferences
Help
Merchant Administrative Functions
Remote Catalog Management System
(RCMS)
Use the SEARCH to create your Category
• Enter as many criteria of search text as needed in the box below.
• Use "OR", "AND" and "NOT" to make your search more accurate.
• Use Parentheses to avoid ambiguities.
• For more advanced searches, you can use the wildcards * and ?
So, to find all products about "1996 Merlot" or "1997 Cabernet",
enter: (1996 and Merlot) or (1997 and Cabernet)
To find all products about "1955" or "1985 ",
simply enter: 1955 or 1985
1957
176
Search
178
Reading file... Done

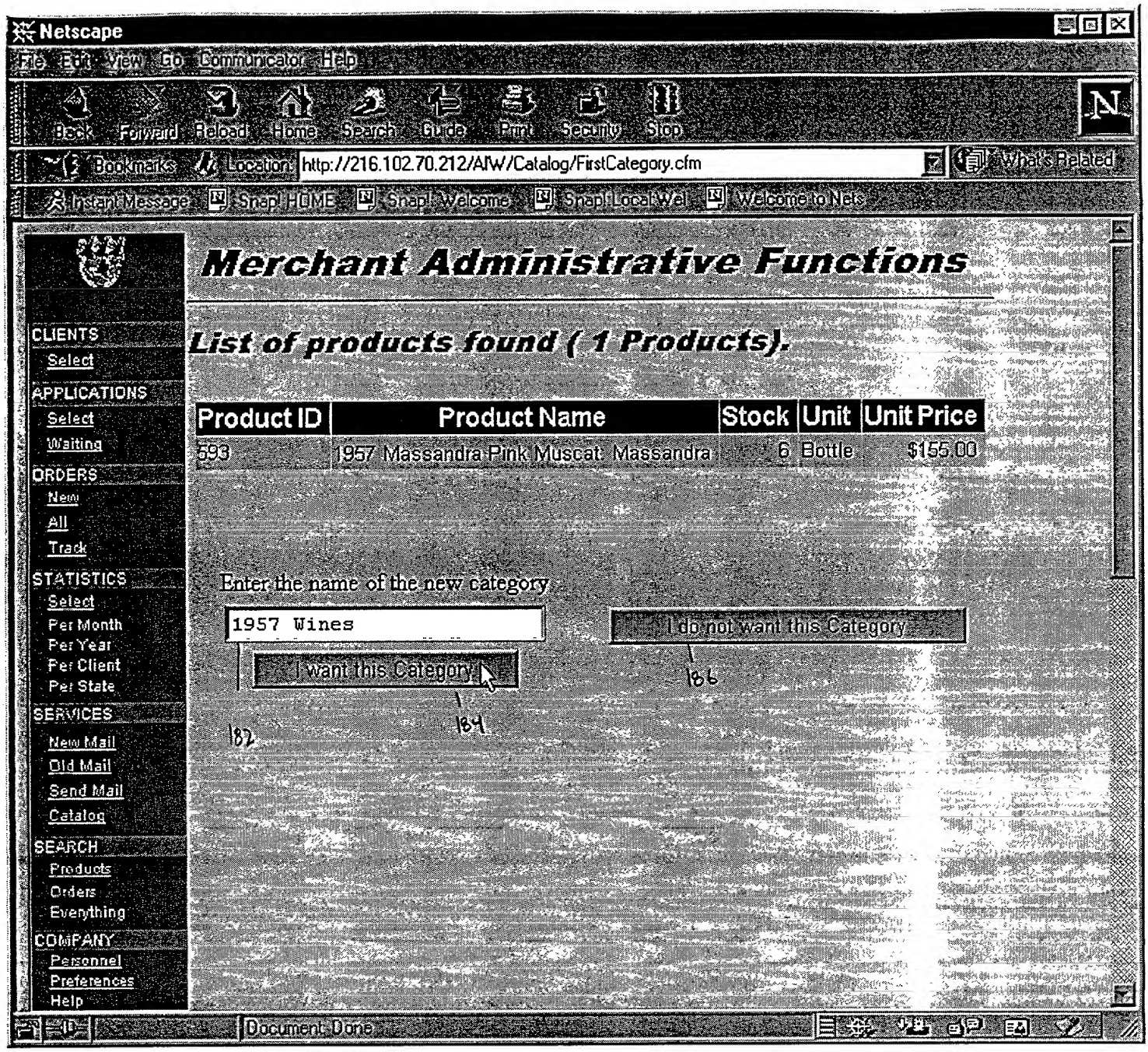
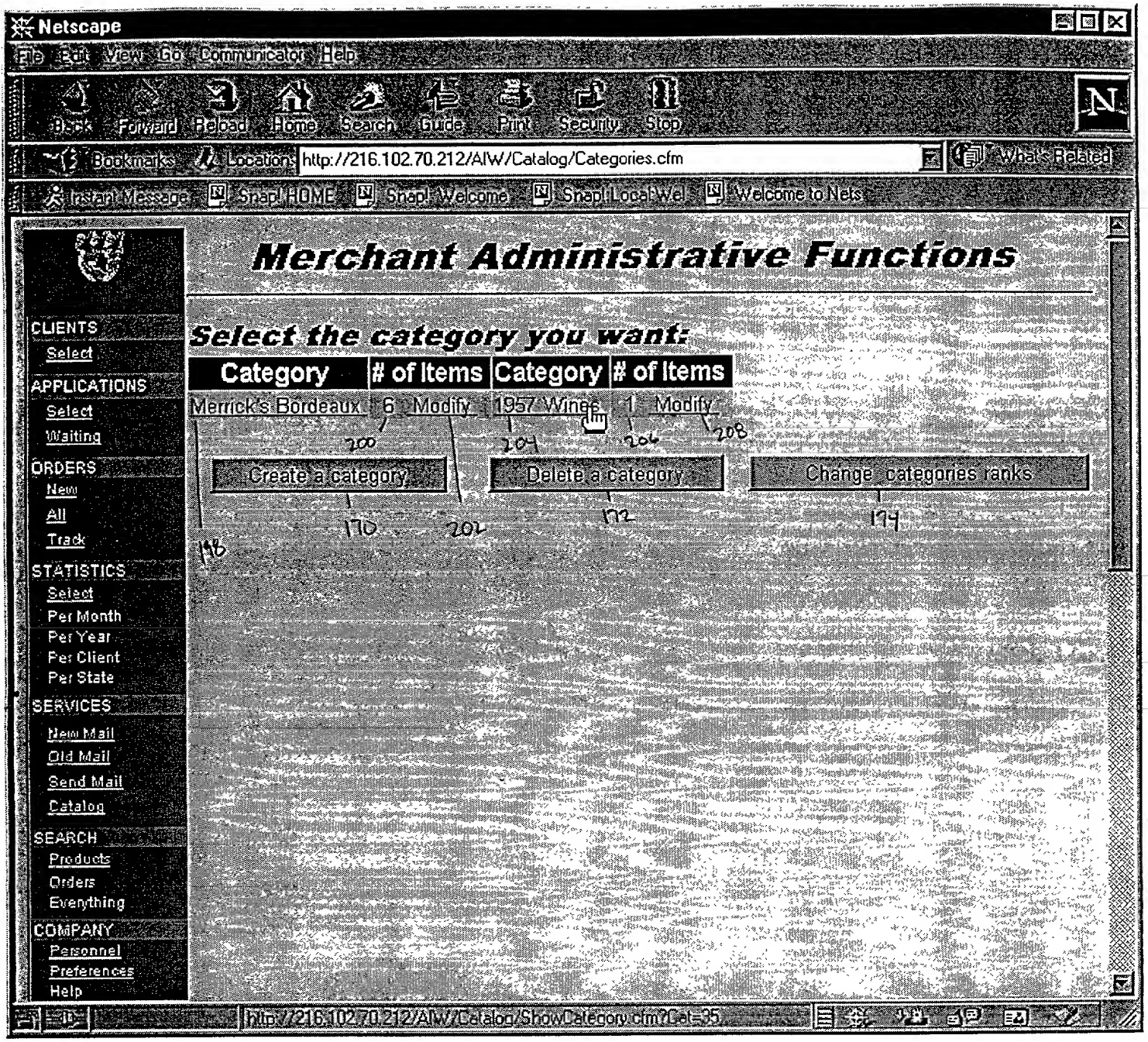

Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Guide Print Security Stop
Bookmarks Location: http://216.102.70.212/AIW/Catalog/FirstCategory.cfm
What's Related
Instant Message Snap! HOME Snap! Welcome Snap! Local Wel Welcome to Nets
Merchant Administrative Functions
CLIENTS
Select
APPLICATIONS
Select
Waiting
ORDERS
New
All
Track
STATISTICS
Select
Per Month
Per Year
Per Client
Per State
SERVICES
New Mail
Old Mail
Send Mail
Catalog
SEARCH
Products
Orders
Everything
COMPANY
Personnel
Preferences
Help
List of products found (1 Products).
Product ID
Product Name
Stock
Unit
Unit Price
593
1957 Massandra Pink Muscat: Massandra
6
Bottle
$155.00
Enter the name of the new category
1957 Wines
I want this Category
I do not want this Category
182
184
186
Document: Done

Fig 22


Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Guide Print Security Stop
Bookmarks Location: http://216.102.70.212/AIW/Catalog/Categories.cfm
What's Related
Instant Message Snap! HOME Snap! Welcome Snap! Local Wel Welcome to Nets
Merchant Administrative Functions
CLIENTS
Select
APPLICATIONS
Select
Waiting
ORDERS
New
All
Track
STATISTICS
Select
Per Month
Per Year
Per Client
Per State
SERVICES
New Mail
Old Mail
Send Mail
Catalog
SEARCH
Products
Orders
Everything
COMPANY
Personnel
Preferences
Help
Select the category you want:
Category
# of Items
Category
# of Items
Merrick's Bordeaux
6
Modify
1957 Wines
1
Modify
200
204
206
208
Create a category
Delete a category
Change categories ranks
170
202
172
174
196
http://216.102.70.212/AIW/Catalog/ShowCategory.cfm?Cat=35

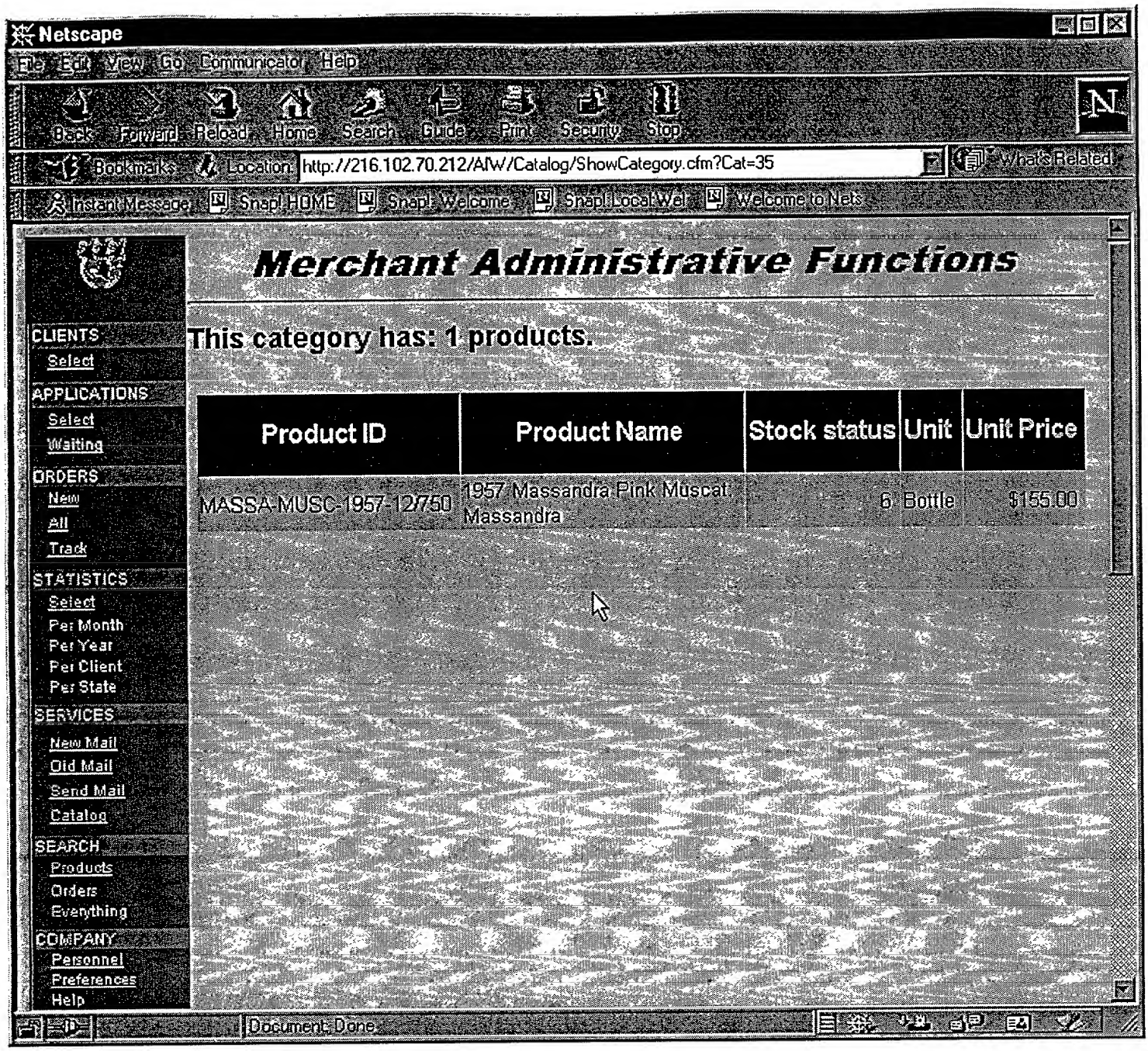

Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Guide Print Security Stop
Bookmarks Location http://216.102.70.212/AIW/Catalog/ShowCategory.cfm?Cat=35
What's Related
Instant Message Snap! HOME Snap! Welcome Snap! Local Wel Welcome to Nets
Merchant Administrative Functions
This category has: 1 products.
Product ID
Product Name
Stock status
Unit
Unit Price
MASSA-MUSC-1957-12750
1957 Massandra Pink Muscat Massandra
6
Bottle
$155.00
CLIENTS
Select
APPLICATIONS
Select
Waiting
ORDERS
New
All
Track
STATISTICS
Select
Per Month
Per Year
Per Client
Per State
SERVICES
New Mail
Old Mail
Send Mail
Catalog
SEARCH
Products
Orders
Everything
COMPANY
Personnel
Preferences
Help
Document: Done

Fig. 24

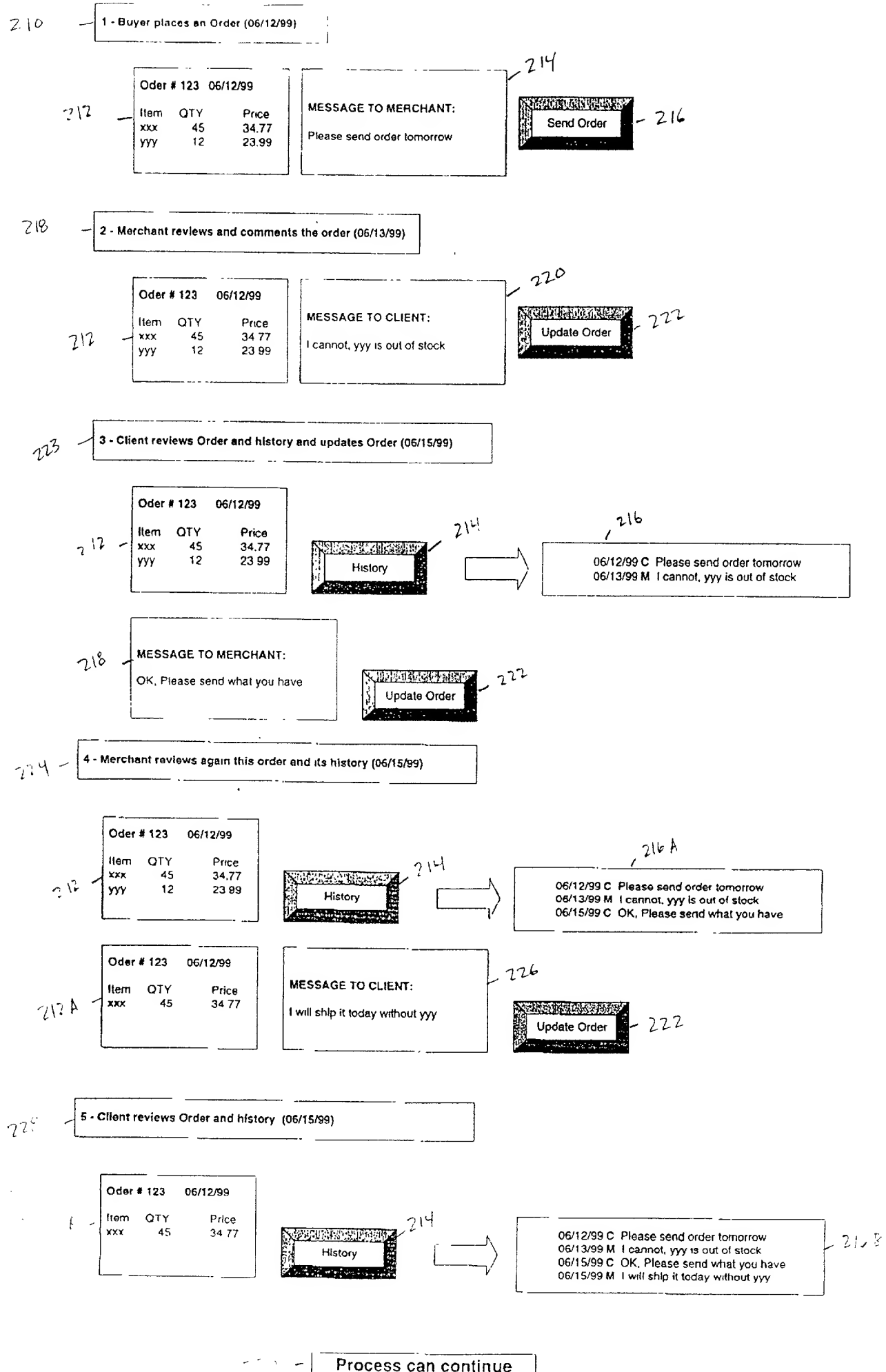

210
1 - Buyer places an Order (06/12/99)
Oder # 123 06/12/99
Item QTY Price
xxx 45 34.77
yyy 12 23.99
212
MESSAGE TO MERCHANT:
Please send order tomorrow
214
Send Order
216
218
2 - Merchant reviews and comments the order (06/13/99)
Oder # 123 06/12/99
Item QTY Price
xxx 45 34 77
yyy 12 23 99
212
MESSAGE TO CLIENT:
I cannot, yyy is out of stock
220
Update Order
222
223
3 - Client reviews Order and history and updates Order (06/15/99)
Oder # 123 06/12/99
Item QTY Price
xxx 45 34.77
yyy 12 23 99
212
History
214
216
06/12/99 C Please send order tomorrow
06/13/99 M I cannot, yyy is out of stock
218
MESSAGE TO MERCHANT:
OK, Please send what you have
Update Order
222
224
4 - Merchant reviews again this order and its history (06/15/99)
Oder # 123 06/12/99
Item QTY Price
xxx 45 34.77
yyy 12 23 99
212
History
214
216 A
06/12/99 C Please send order tomorrow
06/13/99 M I cannot, yyy is out of stock
06/15/99 C OK, Please send what you have
Oder # 123 06/12/99
Item QTY Price
xxx 45 34 77
212 A
MESSAGE TO CLIENT:
I will ship it today without yyy
226
Update Order
222
225
5 - Client reviews Order and history (06/15/99)
Oder # 123 06/12/99
Item QTY Price
xxx 45 34 77
History
214
06/12/99 C Please send order tomorrow
06/13/99 M I cannot, yyy is out of stock
06/15/99 C OK, Please send what you have
06/15/99 M I will ship it today without yyy
216 B
Process can continue

Fig. 2B

Merchant Administrative Functions

CLIENTS
Select

APPLICATIONS
Select
Waiting

ORDERS
New
All
Track

STATISTICS
Select
Per Month
Per Year
Per Client
Per State

SERVICES
New Mail
Old Mail
Send Mail
Catalog

SEARCH
Products
Orders
Everything

COMPANY
Personnel
Preferences
Help
Sign Off

Order Details

Client	Sandi Belcher	**Order Name**	Order 06/12/99
Client Code	BELCH	**Date Placed**	06/12/99

	SHIP TO:	**BILL TO:**
Company	Sandi Belcher	Sandi Belcher
Name	Harry, Bigbucks	Harry, Bigbucks
Address	Box 50	Box 50
	St. Helena, CA, 94574	St. Helena, CA, 94574
	UNITED STATES	UNITED STATES
Email	harry@superliquor.com	harry@superliquor.com
Phone	707.963.2496	707.963.2496
Fax	707.963.3429	707.963.3429

Product Code	Product Name	Quan	Stock	Unit	Unit Price	Item Total
ACHAI-HELEN-NV-12/750	NV Achaia Clauss St. Helena	7	-6	Case	60.00	420.00
				Unadjusted Total		420.00
				Adjustment to final total cost		468.00
				Final Total		888.00

215 — **Last Instructions From the Client:** I need this fast! HISTORY – 219

Message from: Aiw

217 —

Carrier UPS | **Tracking Number** 1zw248x12210553279 | **Shipping date MM/DD/YYYY** | Display Tracking Details

Status: ACCEPTED | Update, then View Next

211 213

Fig 25A

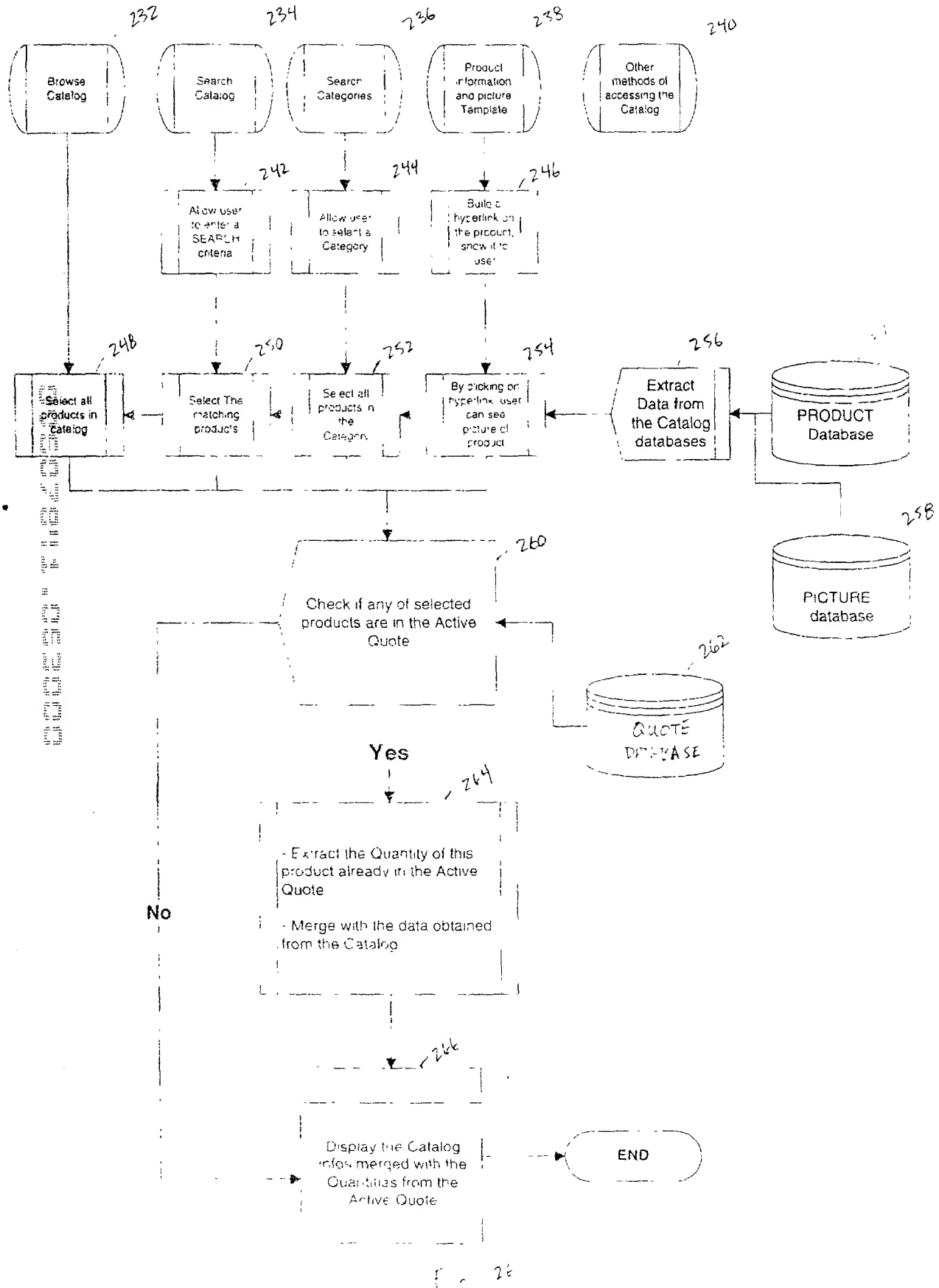

232
234
236
238
240
Browse Catalog
Search Catalog
Search Categories
Product information and picture Template
Other methods of accessing the Catalog
242
244
246
Allow user to enter a SEARCH criteria
Allow user to select a Category
Build a hyperlink on the product, show it to user
248
250
252
254
256
Select all products in Catalog
Select The matching product's
Select all products in the Category
By clicking on hyperlink user can see picture of product
Extract Data from the Catalog databases
PRODUCT Database
258
PICTURE database
260
Check if any of selected products are in the Active Quote
262
QUOTE DATABASE
Yes
264
- Extract the Quantity of this product already in the Active Quote
- Merge with the data obtained from the Catalog
No
266
Display the Catalog infos merged with the Quantities from the Active Quote
END

Fig. 2

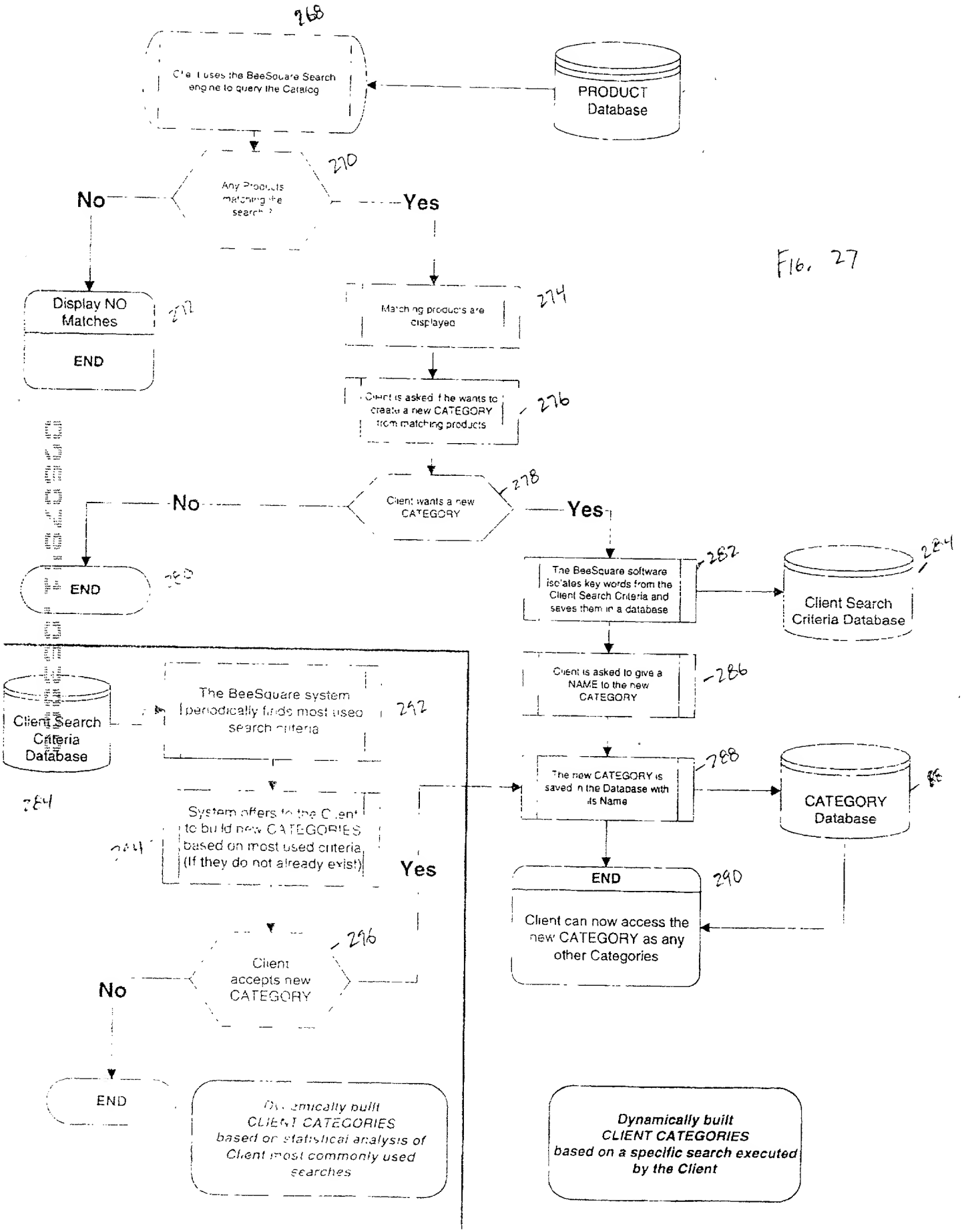


Fig. 27

Fig. 27A

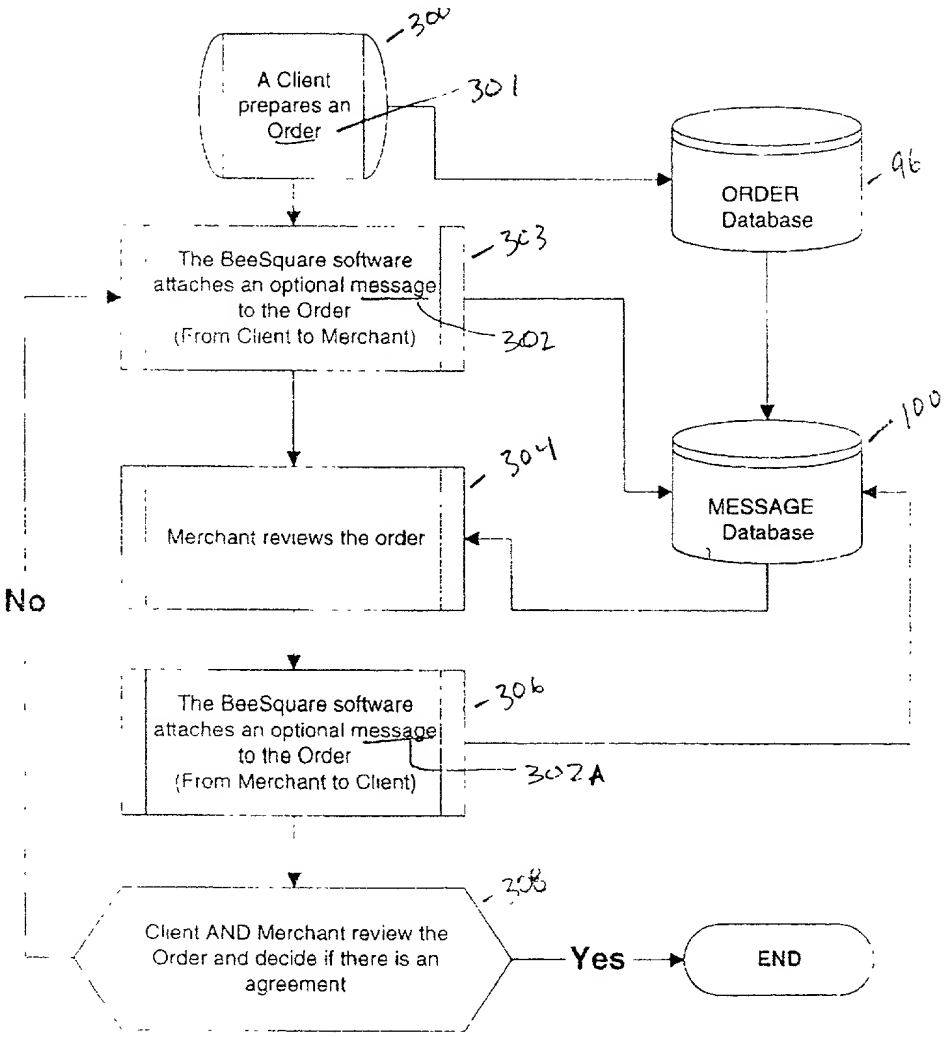

A Client prepares an Order
301
ORDER Database
96
The BeeSquare software attaches an optional message to the Order (From Client to Merchant)
303
302
MESSAGE Database
100
Merchant reviews the order
304
No
The BeeSquare software attaches an optional message to the Order (From Merchant to Client)
306
302A
Client AND Merchant review the Order and decide if there is an agreement
308
Yes
END

FIG. 28

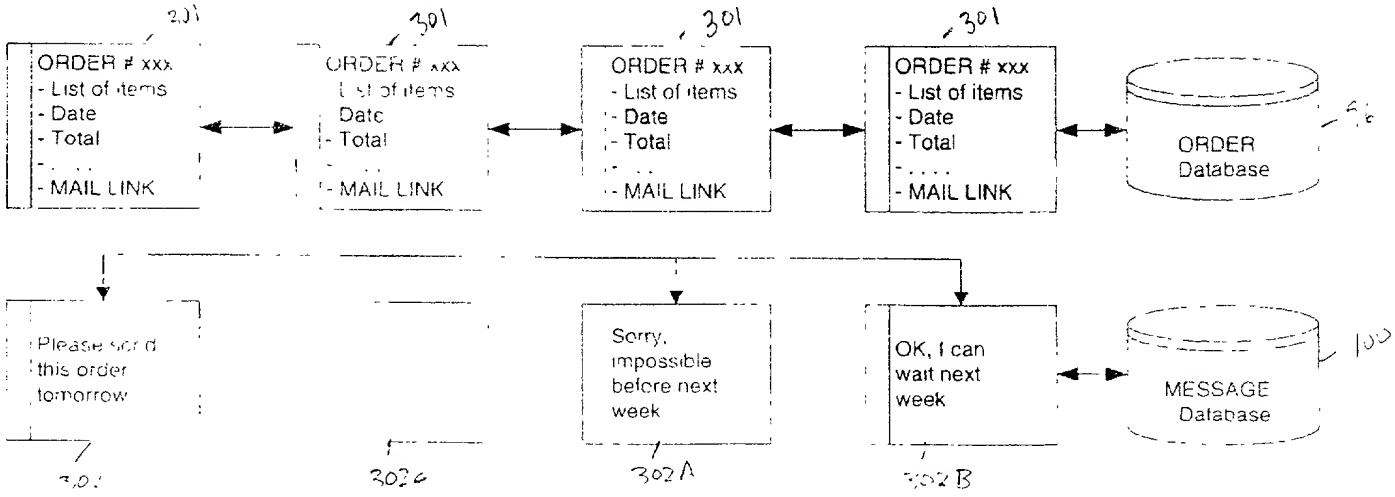

ORDER # xxx
- List of items
- Date
- Total
- MAIL LINK
301
ORDER Database
96
Please send this order tomorrow
Sorry, impossible before next week
OK, I can wait next week
MESSAGE Database
100
302A
302B

FIG. 29

United States Patent & Trademark Office

Office of Initial Patent Examination -- Scanning Division

Application deficiencies were found during scanning:

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(Document title)

☐ Page(s)_____ of _____ were not present for scanning.
(Document title)

☒ Scanned copy is best available. Drawings